STUDIES IN MARITIME HERITAGE OF ODISHA



Sunil Kumar Patnaik

Odishan Institute of Maritime and South East Asian Studies



View of Aragarh Excavations



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Odishan Institute of Maritime
and South-East Asian Studies
Department of Tourism & Culture (Culture)

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MESSAGE

Odisha is gifted with a number of navigable rivers and a long coastline. It is, therefore, natural that maritime activity in Odisha must have developed from very ancient times. This is amply borne by archaeological as well as literary sources. One of the early large scale Indian exoduses was the result of Ashoka's invasion of Kalinga. The early interaction was generally a peaceful venture. The principalities in the early port towns as well as local inland chiefs welcomed for their own reason artisan, masons, traders and pilgrims, the intellectuals of India for exchange of goods for royal taste. Maritime contacts and cultural interactions between civilizations, which contributed to the process of mutual enrichment, are fascinating aspects of the history of mankind. This has been documented in this monograph as a part of research work.

I hope this publication 'Studies in Maritime Heritage of Odisha', will kindle interest in the mind of young scholars of maritime studies and researchers to carry out further research in the field.

I congratulate the academic output of the OIMSEAS for documenting the scattered resources and also recently discovered material evidences and bringing out them in a published form on the occasion of the National Seminar on 'Recent Researches on Early History and Archaeology of Odisha' to be held from 30th to 31st May 2016.

AC Panda

(Ashok Chandra Panda)

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MESSAGE

The echo of maritime past of Odisha is reflected in standing monuments, archaeological remains, fair and festivals and also folklore and traditional knowledge system which has been documented by various scholars in the past. Still many of the resources remain unattended. The Odishan Institute of Maritime and South East Asian Studies has undertaken several research programmes to document maritime heritage sites through explorations and excavations. In this monograph **'Studies in Maritime Heritage of Odisha'**, an attempt has been made to disseminate the recent archaeological and other related findings to reconstruct the maritime activities of Odisha during historical periods. This monograph primarily delineates an overview of its maritime past by considering the existing source material as also the evidences from newly documented sites.

Though few works in this direction have already been published by eminent scholars, still recent archaeological findings and new researches has been incorporated with an exhaustive Bibiliography on the subject. The endeavor is definitely praiseworthy and a contribution to the existing knowledge.

I expect that this monograph will be helpful for the researchers, scholars, general readers, travelers as well as for tourism promotion.

(Manoranjan Panigrahi)

Sri Amarendra Kumar Patnaik, OAS (SAG)
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FOREWORD

The term maritime has been derived from the Latin word, *maritimis*, means, *marttim* which refers more specifically to the Sea as a field of human action. In other words, it refers to the use of the sea by man for some human interest connected with the sea. It denotes coastal commercial and naval activities undertaken by traders and merchants on the high seas. In recent years, with the insurgency in the methods and contents of historical writing, academicians have taken a lot of interest in maritime research due to the change in perspective from narrative, political, descriptive, elitist history to a more scientific, interdisciplinary, critical history of the common man in order to reconstruct the overall history of humankind.

The advances made in the field of Marine Archaeology have further contributed to the growing interest in maritime studies in recent years. The textual as well as archaeological data for the Early Historic period are not adequate to give a clear picture about the role of Odisha in the navigation of the Indian Ocean. With the scanty textual and material evidences, it is difficult to draw a holistic picture of the maritime linkages of ancient Odisha with the foreign land. However, a humble attempt has been made here by the Odishan Institute of Maritime and Southeast Asian Studies (OIMSEAS) under Department of Culture, Govt.of Odisha to ascertain the maritime glory of Odisha with the help of recently discovered resources from exploration and excavation.

The monograph includes the study of Oceans, its role in the growth and development of a civilization, exchange of goods, people, ideas, modes of behaviour and cultures of various maritime nations of the world particularly of South East Asia. The scope of this subject further enriched within its scope the

study of various related aspects such as seaborne trade and commerce, development of port and port cities, hinterland relations, maritime transportation, riverine transport system, navigation, ocean current, shipping and seafaring activities as well as the service sectors. However, the study thus begins and more research in the area will be taken up in the coming years.

The OIMSEAS, in these recent years, relentlessly intended to explore and excavate Early Historical sites, Buddhist sites, Port sites and interpretation of the Maritime Heritage of Odisha with the help of archaeological, textual, folk-loristic, ethno-historic and ethnological data. In the process of these activities several port sites, ship/boat building centers, resource bearing zones, community participation have been surveyed, documented and published. With these endeavors the maritime heritage of Odisha is becoming clear and the results are enterprising. However, much more work is to be carried out pertaining to seafaring, boat building, community participation, socio-religious spectrum etc. which would help to draw a clear picture of the ancient seafaring and trading patterns of Odisha, operated right from the Early Historic up to the British periods. The Institute also plans to collaborate with the National Institute of Oceanography, Goa, Nalanda-Srivijaya Center, Singapore, Maritime University, and other research and academic organizations engaged in maritime research activities for creating scientific data base.

The efforts of the Scholars of Odishan Institute of Maritime and South East Asian Studies are praiseworthy. The monograph has the excellent study materials on the identification of ancient port sites, trans-oceanic interactions and use of traditional knowledge and skill on Boat making etc. No doubt, it will serve a step forward for recent studies in South East Asia to unravel the cultural linkages and interactions. I hope the monograph will be served as a resource for the researchers, scholars and general readers and also tour promoters and tourism professionals.

AKPatnaik

(Amarendra Kumar Patnaik)

PREFACE

The necessity of compiling of this monograph is felt necessary because a number of archaeological sites have been explored and excavated in recent years. The Odishan Institute of Maritime and South East Asian Studies have excavated very important Early Historical sites like Manikapatna (1996-97), Langudi (997-2007), Radhanagar (2011-13).The archaeological findings from these sites are amazing and throw new light in the study of Early History of Odisha. Besides, a number of archaeological excavations carried out by different organizations like Archaeological Survey of India, Deccan College, Utkal, Revenshaw, and Sambalpur universities in the recent years have also made substantial contribution for the Early Historical Research of the State. Many new evidences have also been found from the excavated sites like Suabarei (ASI), Banka (UU), Deltihuda (RU) which offer a clear picture in the field of Chalcolithic Phase of Odisha. So also the sites like Manikapatna, Langudi, Radhanagr as well as Aragada have contributed enough evidences in the areas of early state formation, maritime heritage, Buddhist heritage and antiquities of early historical period. The finding of rouletted ware, knobbed ware, and NBPW clearly signifies the stature of rich cultural aspects of the early historical period. Most of the above excavated materials are available with the OIMSEAS.

The recent researches show that by 3rd century CE, Mediterraanean trade had declined and many urban centers underwent degeneration and decay. It may be pointed out that the collapse of Han dynasty in China by c.221 CE contributed to the changing picture in Central Asia. By that time we observe a change in the Indian landscape, a rapid process of de-urbanisation. It is evident from the excavated Buddhist sites that even in case of continuous human occupation; post Kushan levels display much poorer building techniques and reuse of earlier materials. This has been observed in the case of Sisupalgarh, Radhanagar, Langudi and at Aragada. A great number of small and large towns were abandoned.

This process has been witnessed in the case of Dantapura, Kalinganagar, Palura and Pithunda etc.

In the next phase the early Buddhist settlements in the Eastcoast like Lalitgiri, Udyagiri, Aragada, Salihundam, Thatlkonda etc, have developed to a greater extent. The trance –oceanic cultural relations particularly with Central Asia in one side and South and South-East Asia on the other where Odisha of this period played a major role. The missing link has been proved with the study of Buddhist monuments of Saranath, Nalanda, Ratnagiri, Lalitgiri, Langudi, Argarh, Salihundam, Bhavikonda and Nagrunakonda of India and the Buddhist monuments of Anuradhapura, Dambula, Poolanaruva (Sri Lanka),Borobudur (Java) and Angkor Wat (Cambodia). Besides, the maritime link has already been studied and established earlier.

These are some of the outcomes of the recent researches of Early History and Archaeology of Odihsa for which Odishan Institute of Maritime and South-East Asian Studies is working for documenting early historical as well as maritime heritage sites of Odisha. The scholars working in the field of Early History and Archaeology are taking help of the available material evidences. Recently, research scholars from Banras Hindu University, Assam University, University of Kolkata, Deccan College, Kyoto University, Japan are using our resource materials and the available resources. This monograph contains some of our recent research outcome for the scholars and researchers as well as tour promoters, particularly working for South East Asia and cultural tourism.

We are extremely grateful to Sri Naveen Patnaik, Honourable Chief Minister of Odisha, for his benevolent support to the research works carried out by the Institute. We are exceedingly thankful to Sri Ashok Chandra Panda, Hon'ble Minister, Tourism and Culture, Sri Aditya Prasad Padhee, IAS, Chief Secretary, Odisha, Sri R Balakrishanan, IAS, Development Commissioner and Adldl. Chief Secretary, Odisha, Sri Manoranjan Panigrahi, IRS, Commissioner-cum-Secretary ,Culture, Sri Amarendra

Kumar Patnaik, OAS (SAG),Director, Culture for their constant inspiration, support and motivation at every sphere of work like excavation, exploration and publication. This monograph would not have been seen the light without their constant support and inspiration.

We acknowledge the meaningful help received from Odisha State Archaeology, Odisha State Museum, State Archives as also from the Department of Tourism and Culture.

We would also like to extend our heartfelt thanks to the scholars who have guided us at various stages and acknowledge our whole hearted respect to Prof. A K Pattnayak, Ex Vice Chancellor UUC, Prof Amitav Acharya (Chair, ASEAN Studies, American University, Wasington D.C.) Prof. Sadasiba Pradhan, (Utkal) Prof. K K Basa (Utkal), Prof. Bhairabi Sahu,(Delhi) Prof. Rabi Mohanty, (Poona) Prof. B. K. Tripathy (Amarkantak), Dr. S. B. Ota, Joint Director General ASI, Dr. D. N. Dimiri, Director, ASI, Dr. Sanjaya Acharya (Utkal) Dr. Subrat Acharya (Revenshaw), Dr.Sila Tripati, (Goa) Dr. AK Patel, Dr, J K Patnaik, Dr. H A Nayak Superintending Archaeologists, Archaeological Survey of India. We acknowledge the painstaking efforts made by Sri Gopal Charan Pradhan, Dr.Balram Tripathy and Subash Mishra for this work.

May 2016.

Dr. Sunil Kumar Patnaik.

Odishan Institute of Maritime &
South East Asian Studies,
Bhubaneswar.

Contents

GEOGRAPHICAL SETTING

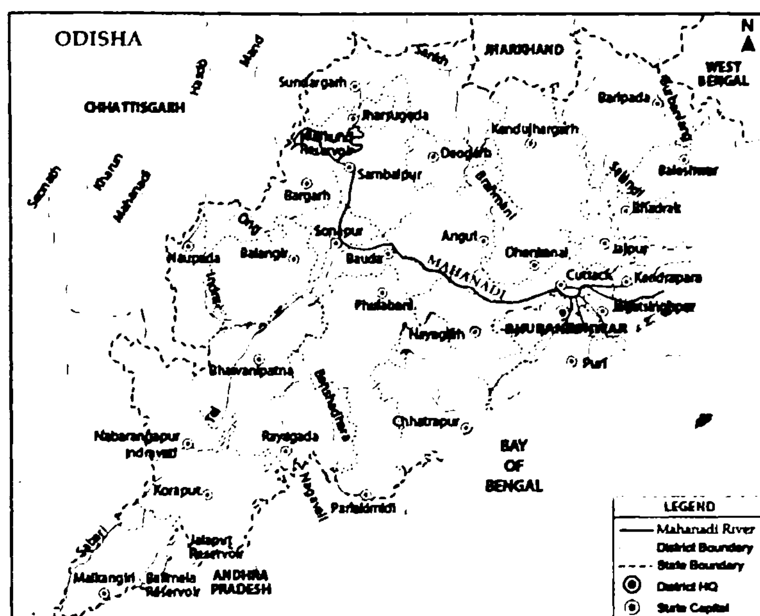
The physical geography and the environmental conditions greatly shape the cultural pattern of a region. The process of evolution involves a series of natural changes that cause species (populations of different organisms) to arise, adapt to the environment, and become extinct. This phenomenon had also happened in the land called Odisha. Odisha has passed through various phases of development since the dawn of civilization. The geographical setting of Odisha has also played a vital role in the progress of various aspects of culture and society. The Bay of Bengal adjacent and the Indian Ocean beyond, helped in developing international trade and commerce as well as foreign relations. The littoral region provided suitable facilities to set up ports and the deltas served as natural harbours. Besides, the navigable rivers like the Ganga, Mahanadi, Baitarani,Brahmani,Vamsadhara,Godavari and others opened up various ways for hinterland trade and commerce. The hill tracts and the hinterland of Odisha provided precious and semi-precious stones so also materials like forest produce,timber,herbs,ivory,textile etc, paved impetus for a thriving trade and interaction with far off countries of South and Southeast Asia.It was easy for traders of north India to reach the ports of Odisha without any hindrance. From the available literary, inscriptional, numismatic and

archaeological findings, it is possible to locate the ancient ports and reconstruct a picture of the maritime heritage of Odisha.

Odisha extends from 17°.49' N latitude to 22°.34' N latitude and from 81°.27' E longitude to 87°.29' E longitude, and positioned in the eastern coast of India. It is surrounded by West Bengal in the north-east, Jharkhand to the north, Chattisgarh in the west and north-west and Andhra Pradesh in the south. The State has an area of 155,820 km and extends for 800 kilometers from north to south and 500 kilometers from east to west and has a coastline of 480 kilometers. The State is now divided into 30 districts. Odisha's topography comprises of fertile plains along the coast and forested highlands towards the interior. The Odiya people who inhabit the coast are generally of Indo-Aryan stock as scholars believe, while the ethinic communities believed to be of pre-Dravidian stock inhabit the interior. A large number of Telugu speaking people inhabit the southern districts adjoining Andhra Pradesh.

Geography and River System

The Chhotanagpur plateau occupies the western and northern portions of the State, while along the coast are fertile alluvial plains and the valleys of the Mahanadi, Brahmani and Baitarani rivers, which empty into the Bay of Bengal. The alluvial plains are home to intensive rice cultivation. Although much of Odisha's forest cover has been denuded lately, one of the greatest attractions of Odisha is its still vast expanses of unspoiled natural landscape that offer a protected and yet natural habitat to the State's incredible wildlife. The Chilka Lake, a brackish water coastal saline lake on the Bay of Bengal, south of the mouth of the Mahanadi River, is the largest coastal lake in India. A major nesting ground for the Olive Ridley sea turtles can be found in the beaches of Odisha; in Devi, Gahirmatha and Rushikulya are known nesting sites for the L. Olivacea Indian Ocean population.



On the basis of homogeneity, continuity and physiographical characteristics, Odisha has been divided into five major geographic regions[1]:

1. The coastal plains in the east
2. The middle mountainous and highland region
3. The central plateaus
4. The western rolling uplands, and
5. The major flood plains

The Odisha Coastal Plains is the depositional landforms of recent origin and geologically belong to the Post-Tertiary Period. The 75 metre contour line delimits their western boundary and differentiates them from the Middle Mountainous Region. This region stretches from the West Bengal boarder, i.e. from the River Subarnarekha in the north to the River Rushikulya in the south. This area is the compounding of several deltas of varied sizes and patterns

made by the major rivers of Odisha, such as the Subarnarekha, the Budhabalanga, the Baitarani, the Brahmani, the Mahanadi and the Rushikulya. Therefore, the coastal plain of Odisha is called the "Hex deltaic region" or the "Gift of Six Rivers". It extends along the seashore of the Bay of Bengal and has the maximum width in the Middle Coastal Plain (the Mahanadi Delta), narrow in the Northern Coastal Plain (Balasore Plain) and narrowest in the Southern Coastal Plain (Ganjam Plain). The North Coastal Plain comprises the deltas of the Subarnarekha and the Budhabalanga rivers and bears evidences of marine transgressions. The Middle Coastal Plain comprises the compound deltas of the Baitarani, Brahmani and Mahanadi rivers and bears evidences of past 'back bays' and present lakes. The South Coastal Plain comprises the laccustrine Plain of Chilika Lake and the smaller delta of the Rushikulya River[2].

The coastal tract extends nearly three-fourth of the entire State. Geologically, it is a portion of the Indian Peninsula, which was a piece of the ancient landmass of Gondwana land[3]. The major rivers of Odisha with their tributaries have cut deep and narrow valleys. This region, mostly comprises of hills and mountains of the Eastern Ghats, which rise abruptly and steeply in the east and slope gently to a dissected plateau in the west running from north-west (Mayurbhanj) to south-west (Malkangiri). The Odisha highlands are also known as the Garhjat Hills. This region is well marked by a number of interfluves or watersheds. The Eastern Ghats is interrupted by a number of broad and narrow river valleys and flood plains. The average height of this egion is about 900 metres above the Mean Seal Level. The highest peak is Deomali in Koraput District.

The plateaus are mostly eroded forming the western slopes of the Eastern Ghats with elevation varying from 305–

610 metres. There are two broad plateaus in Odisha : (i) the Panposh – Keonjhar -Palalahara plateau comprises the Upper Baitarani catchment basin, and (ii) the Nabrangpur – Jeypore plateau which comprises the Sabari basin. These are lower in elevation than the plateaus having heights varying from 153 meters to 305 meters. Almost one-third of Odisha is covered by forests which make up about 37.34% of the total land area of the State[4]. These forests cover most of southern and western Odisha. The eastern plains, adjacent to the coast are covered by farmlands. The forest cover extends over an area of 58,136.869 square kilometres out of which reserve forests make up an area of 26,329.12 square kilometres demarcated protected forests make up 11,687.079 square kilometres and undemarcated protected forests make up 3,638.78 square kilometres. Other types of forests make up 16,261.34 square kilometres while unclassed forests make up 20.55 square kilometres of the total forest cover[5]. The State Government of Odisha also classifies forests based on their density. About 538 square kilometres of land are classified as very dense forests with a canopy density of over 70 percent, 27,656 square kilometres of forests are classified as moderately dense cover with a canopy density of 40 to 70 percent and 20,180 square kilometres of land are classified as open forest with a canopy density of 10 to 40 percent[6]. There are four groups of rivers which flow through Odisha into the Bay of Bengal

They are[7]:

(i) Rivers that have a source outside the State such as the Subarnarekha, the Brahmani, the Ib and the Mahanadi.

(ii) Rivers having a source inside the State i.e.,the Budhabalanga, the Baitarani, the Salandi and the Rushikulya.

(iii) Rivers having a source inside Odisha but flow through other states that are the Vamsadhara,Bahuda and the Nagavali.

(iv) Rivers having a source inside Odisha, but tributary to rivers which flow through other states i.e., the Machkund, the Sileru, the Kolab and the Indravati.

Mahanadi: It is the major river of Odisha and the sixth largest river in India. It originates from the Sihawa hills of the Bastar Plateau in Raipur district of Chhattishgarh. It is about 857 km long (494 km. in Odisha) and its catchment area spreads over an area of 141,600 sq.km. (65,580 sq.km. in Odisha). The river is the lifeline of Odisha.It serves water resource for the entire State. This river is a source for the development ancient settlements and riverine trade activites through the ages. The remains of historical past on either side of the river still echoes the glorious historical past.

Brahmani: It is the second largest river in Odisha. It originates as two major rivers like the Sankh and the Koel from the Chota Nagpur Plateau of Jharkhand and both join at Veda Vyasa near Rourkela of Sundargarh district of Odisha forming the major river Brahmani. It flows through the Eastern Ghats in Sundargarh, Deogarh, Keonujhar, Dhenkanal, Cuttack and Jajpur districts into the Coastal Plains and enters into the Bay of Bengal along with a combined mouth with the Mahanadi known as the Dhamara. The Brahmani is 799 km. long (541 km. In Odisha) and its catchment area spreads over 39,033 sq.km. in Odisha.

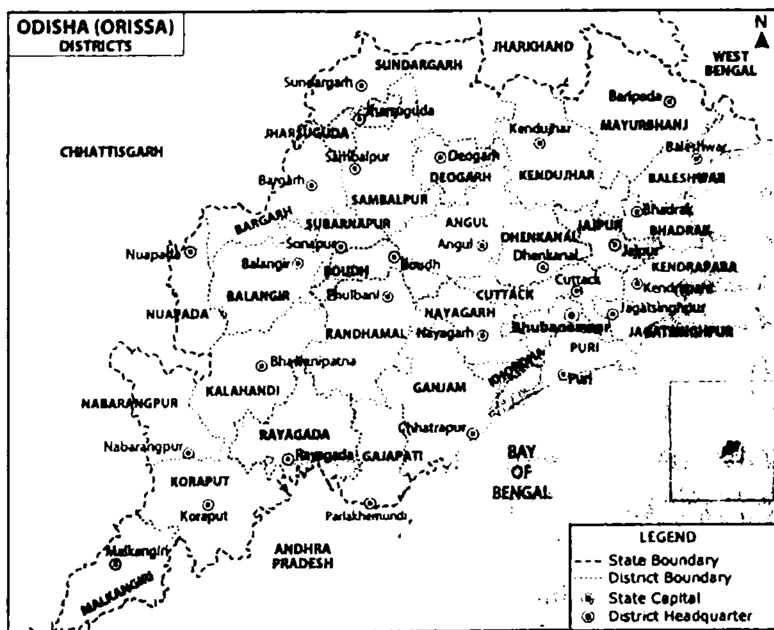
Baitarani: It originates from the Gonasika hills of Keonjhar district. It is 365 km. long and its catchment area spread over an area of 12,790 sq.km. It entres into the Bay of Bengal after joining of the Brahmani at Dhamara mouth near Chandbali, Bhadrak district.

Subarnarekha: It originates from the Chhotanagpur Plateau of Jharkhand. It is 433 km. (70 km. in Odisha) and has a catchment area of 19,500 sq.km. (3,200 sq. km in Odisha).

Budhabalanga: It originates from the eastern slopes of the Similipal massif. It is about 175 km. long having a total catchment area of 4840 sq. km. It's major tributaries are the Sone, the Gangadhar, the Chatra etc.

Rishikulya: It originates from the Rushiamala hills of the Eastern Ghats in Kandhamal district. It is 165 km long with 8900 sq.km of catchment areas. Its tributaries are the Baghua the Dhanei, Badanadi etc. It has no delta at its mouth.

Vamshadhara: It originates from the flanks of the Durgakangar hills (Lingaraj hills) of the Eastern Ghats in Kalahandi district. It is 230 km. long out of which only 150 km.is in Odisha. It enters into the Bay of Bengal at Kalingapatnam in Andhra Pradesh. It has a catchment area of 11500 sq.km. There are several historical sites that bear history and heritage of Odisha but are now in Andhra Pradesh (Seema Andhra). These are Dantapuram, Salihundam , Kalingapatanam, Mukhalingam etc.



Nagavali: It originates from the Bijipur Hills of the Eastern Ghats near Lanji Garh. It is 210 km. long out of which 100 km. is in Odisha. It has a total catchment area of about 9410 sq. km.

Salandi: It originates from the Meghasani Hills of the Similipal Massif in Keonjhar district. It is 144 km long with a catchment areas of 1793 sq. km.

Indravati: It originates from the Eastern Ghats in Kalahandi district. It is 530 km long with a catchment area of 41700 sq.km. As a tributary it empties into the Godavari river.

Kolab: It originates from the Sinkaran hills of the Eastern Ghats in Koraput district. It has catchment areas of 20400 sq.km.

Tel River: It is one of the largest rivers of Odisha originating in Nabarangpur district and touching Chhattisgarh and Kalahandi, Balangir, Subarnapur districts of Odisha and finally merges in to the Mahanadi at Manamunda.

Chilika Lake : It is a brackish water lagoon located in the southern part of the Odisha coastal plain. Its areas vary 1165 sq.km and 906 sq. km; during the rainy and summer seasons and it is 71 km. long and 32 km. wide. Its salinity declines to a minimum during the monsson. However, in winter, due to the overflow of the tidal water through the narrow opening from the Bay of Bengal, the salinity is maximum.

Anshupa is a sweet water lake located in Athagarh sub-division of Cuttack district. It is 3 km. long and 1.5 km wide. There is a small channel which connects Ansupa with river Mahanadi during the rainy season.

Physical Environment

Coastal Odisha is a lowland plain, fringed on the landward side by laterite shelves on the irregular upland margn. However, a few hills descend almost to the sea near Balasore

as the Neelachand hills, to the immediate west of Lake Chilka and in the south. The lowland is a vast alluvial plain, 80 kilometers wide on an average, but wider in the central deltaic plains. North to south, the region falls into three distinct physical divisions; the Balasore plains in the north, the Mahanadi-Baitarani-Brahmani joint delta in the middle and Lake Chilka and the plains to the south.

The Mahanadi which drains the central part rises in the Chatishgarh uplands and has seasonally a very uneven river flow. During a lean season it dwindles to a mere 112.5 cusecs while, during floods, it has a flow exceeding 2 million cusecs, almost comparable with the lower Ganga. The Baitarani and Brahmani are smaller rivers which flow to the north of the Mahanadi. Lake Chilka is a lagoon -lake which opens to the sea in the north-east, being separated from the sea by a complex spit. The lake water is at times brackish and at times almost fresh, depending on the flow and ebb of the tide. The lake itself varies in the size between 900 square kilometers and 1165 square kilometers. It is only a few meters deep. To the south of Lake Chilka, the southern coastal plain is centered around Rusikulya valley and is covered with black loam. The central delta region protrudes into the sea, because of heavy alluvial sedimentation.

Apart from the three major rivers, that drain east in the central parts of the Odisha plains, small streams drain the rest of the coastal plains. A few streams drain into Lake Chilka from north and west.

There is little relief in the coastal plains of Odisha. It is only on the sea-side, that sand hills cum dune belt rising to about 20 metres are formed, always from the major river mouths that have a mangrove vegetation cover.

The State as a whole enjoys a tropical, hot and humid climate. The Balasore lowlands that adjoin the Bay head on

the west, receive the heaviest rainfall. This area lies on a cyclone path, and a few cyclones escape through this zone in May-June, when rainfall is quite heavy. Rainfall in general decreases from north to south, the Andhra border receiving lesser rains and hence enjoying a sub-humid climate. The annual rainfall is of a variable nature, depending on the number and strength of the cyclones that hit the coast.

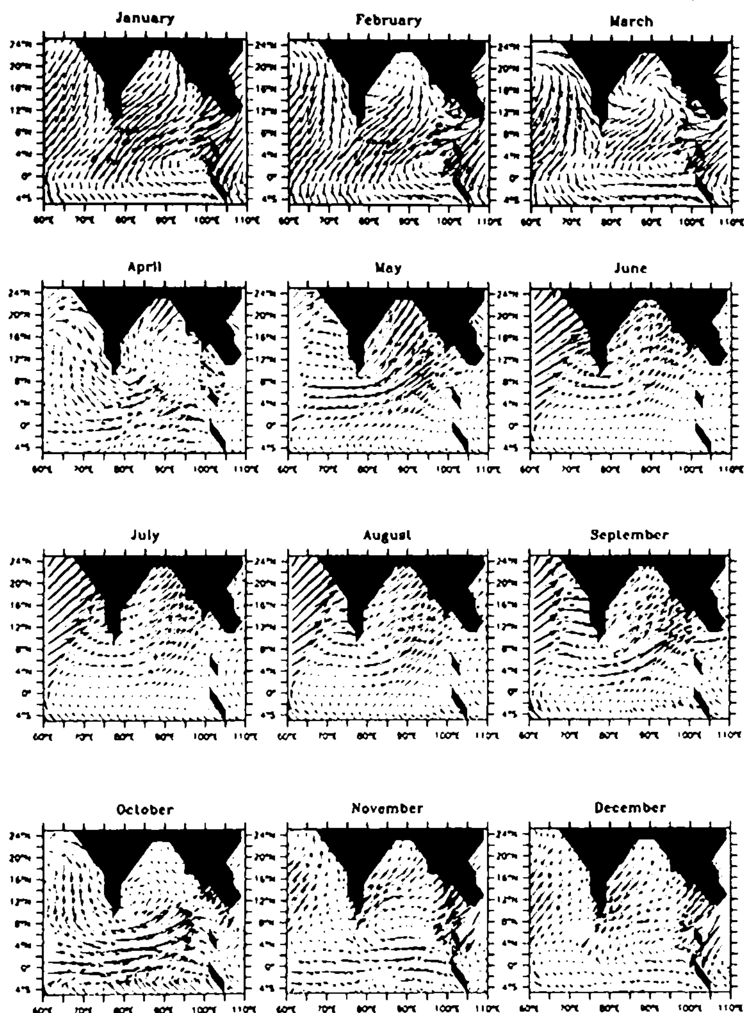
The region is entirely under rice cultivation. Forests' have retreated to the interior into the laterite plateaus and the hill belt. Because of a favorable physical environment, the coastal lowlands are densely populated, accounting for a major share of population of the State. The coast has attracted most of the towns and ports have been developed over centuries in the coastal region[8].

The Coast and the Sea Around

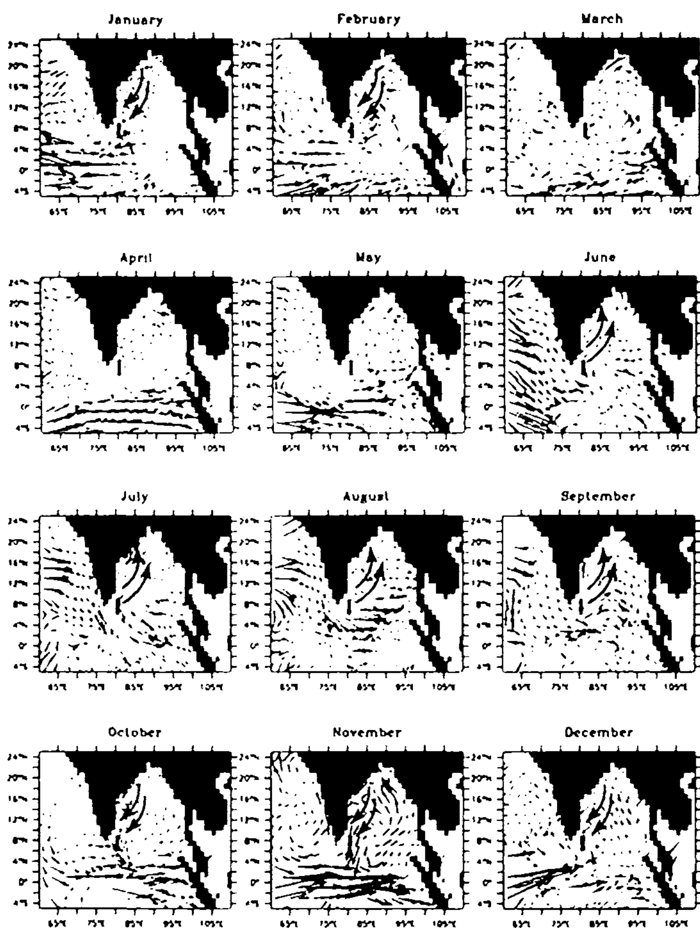
The physical features of the coastal regions of India are a sort of *terra incognita*. The coastal plains of Odisha are narrow in the north, wide in the middle, and narrow in the south. Coastal Odisha is characterised by wide deltas. The monsoons are a great force in shaping the shore features. Further, the rivers of Odisha have created large deltas at their confluence with the Bay of Bengal as discussed. The Mahanadi delta starts its projection on north east of Chilka lake. The sediments brought by longshore drifting from the southwest during the Southwest monsoon, and currents or drifts are arrested in the Chilka lake. Starting from east there is a straight shoreline for about 120 km between the Mahanadi delta and Srikakulam. There are only two marine inlets within these long stretches, one at the narrow mouth (400-600 m) of the Chilka lake and the other on the mouth of the Rushikulya river.

The Odisha coast runs SW-NE up to Lake Chilka in the south, gradually turns towards NNE and runs in that

Present climatological current pattern over the Indian Ocean region



Present climatological current pattern over the Indian Ocean region



Courtsy :Sila Tripati :Marine Archaeologist ,NIO,Goa. CURRENT SCIENCE, VOL. 100, NO. 7, 10 APRIL 2011

direction up to the mouth of Devi river. Thereafter the coast runs NNE up to Playmra, at the north end of the delta. A bay is formed to its north, Balasore being in the centre of the bay. The coast ends at Digha.

Between Wheller Islands and Nurrea Bangi Nasi to its south, the shore curves slightly inward,forming the False Bay. To the north of Palmyra is a more pronounced curvature of the shore, forming the Balasore Bay. Shrott Island lies just off the Dhamra river to its south.

The sea floor descends to a depth of 20 metres in the first 6 kilometres from the shore, in the southern parts till the Mahanadi mouth except when it is close to the entrances to Lake Chilka, where the gradients are much less due to sediments. Here the sedimentation from the lake forms a shoal. Off the joint delta of the Mahanadi, Baitarani and Brahmani, the sea floor is gentle due to the heavy deposition of sediments from the rivers. Balasore Bay also has gentle floor gradients, the first 6 to 8 kilometres from the shore is half as steep as the sea floor further south.The tidal circulation in the in-shore waters has only about 1.5 metres tidal range, the highest being around Wheeler and Shrott Islands[9].

Coastal Current Circulation

Balasore Bay is a region of sediment accumulation, to the west of the Bay head. It has agitated waters during the monsoon period. The monsoon season is one of a north bound littoral circulation being driven by the monsoon winds from the south and east. After September, the littoral circulation, till April is south-bound and it is taken advantage of, for coasting in this period to the coast of Andhra, Tamil Nadu and Sri Lanka. The littoral circulation is barely a knot in velocity. The open Bay of Bengal water movement little affects the coastal circulation.

The sea-floor along the Odisha coast is smooth and sandy, by and large, with practically no hidden under-water risks. It is only along the Andhra(Telengana) boundary that some hazards like Santapalli Rocks and Investigator Rock off Barua need to be guarded against while sailing in coastal waters. The only other area of sailing hazard for coasting crafts lies in the neighborhood of Wheeler hood of Wheeler Islands and Nurra Banga Nasi, where the boat is likely to run aground on the sands under water.

On the whole, the Odisha coast is free from sailing risks. The coast is also away from the main sailing routes between the Bay and Hugli mouth on one hand and the east coast south of Lake Chilka on the other[10].

Contribution of Geography for Maritime Heritage

From the dawn of civilization, the geographical orbit as discussed above named as Odisha has played a vital role in inland as well as overseas trade which is reflected both in archaeological and literary sources. It served a midway between Central Asia in one side and Southeast Asia on the other.The Buddhist establishments recently discovered at Radhanagar, Langudi, Ratnagiri, Udayagiri, Lalitgiri have enough evidences to prove the fact. Its geographical location (in between north and south India) and her favorable position along the shore of the Bay of Bengal provided an excellent opportunity for its inhabitants to venture maritime trade. The entire hinterland has a net of several big and small navigable rivers as discussed which finally fall in the Bay of Bengal. Most of the river mouths were spotted with ports from the Subarnarekha to the Vamsadhara. The meandering coast-line along with environmental conditions has imbibed an inborn instinct in the inhabitants to venture into the sea or river which in due course made them a seafaring people. This has become a historical phenomenon and ample historical as well as

archaeological evidences are available in the form of traditions and travelogues, scriptures and sculptures and remains such as structurs, bricks, jetty, pottery, beads, art objects and many more some of which are described in the succeeding chapters.

The mutual relations and contacts between ancient Odisha and South-East Asia continued at least from the 4th century BCE. Situated on the shore of Bay of Bengal, ancient Odisha comprised the coastal regions of modern Odisha, the hinterland and the adjacent coastal districts of Andhra Pradesh and Bengal, is known variously in the historical records as Kalinga, Utkala,Toshala, Odra, Orissa and Odisha. Owing to its location between the two great East Indian deltaic regions of the Ganges and the Godavari-Krishna rivers, Kalinga itself had two distinctive historical core areas in the delta regions of the Mahanadi in central Odisha and further to the southeast of the Rishikulya and Vamsadhara rivers in southern Odisha and northern Andhra Pradesh. In ancient times almost all the trade centers (ancient ports) are referred to have been located in these coastal areas of south-eastern India controlled by Kalingan people. The Buddhist texts such as *Aryamanjusrimulakalpa, Diviyavadna, Mahavamsa,* the *Jatakas* as well as Jaina texts, *Astadhyee,* Greek writings of Piliny, Ptolmy, Hieun Tsang's accounts, Arab writers accounts refer to Odisha's sea-borne trade with the outside world through a number of ports situated on the coast of Kalinga. Odisha has acted as a gateway for overseas Asian trade network.

In the early historical period, the overseas trade was not feasible without making a halt at intermediary places for replenishment. Ships voyaging from ports of the East Coast of India to South-East Asian countries used Nicobar Islands as halting stations. I-Tsing, the Chinese traveller, has stated that from Tamralipti to Nicobar Islands was thirty days sail and from Sri Vijaya to China was twenty days sail. Vessels sailing

regularly from ports of Bengal, Odisha and Andhra Pradesh proceeded towards the Burmese coast, then sailed along the coast of Andaman Sea and reached Malacca Strait, subsequently making a direct voyage to the Malaya Peninsula and then to the East Indies, China and beyond[11] (Sila Tripati 2002). The *Vinaya* texts and *Jataka* stories mention that the merchants of northern India namely from Sahajati, Kausambi, Varanasi, Pataliputra and Champa brought their cargo to Tamralipti for trade with South-East Asian countries. The traders along with Buddhist monks visited the ports namely Kanthi, Kainapara, Dosarene, Kalingapatnam and Maisolia and then sailed farther beyond Sri Lanka[12] (Sarma 1990-91). Coedes[13] (1968) has proposed two probable overseas routes to South-East Asia from the Indian subcontinent. The first route could start from south India either through the 10^0 channel crossing the Andaman and Nicobar Islands leading to Takuapa in Thailand or south of 10^0 channel crossing the Nicobar Islands heading towards the headland of Aceh and reaching Kedah in Malaysia. From these places mariners sailed to other regions of South-East Asia. In the second route ships could be sailing along the coast of Martaban and Tavoy in Burma(Myanmar) from there on caravan route crossing the three Pogodas and other passes reaching the Menam Chao Phraya Delta by way of Kanchanaburi and Ratchaburi.

There were regular coastal voyages from the mouth of the river Ganges to Sri Lanka. The ports of embarkation were Tamralipti, Palur, Kalingapatnam, Dharanikota, Masulipatnam, Arikamedu, Poompuhar and Sopatma from where ships sailed a more southerly course to the north end of Sri Lanka, then they crossed the Bay of Bengal into the 10^0 channel aided by favourable wind direction and currents. Afterwards they sailed towards the east of Sumatra and reached Java, Bali Island and other South-East Asian countries

by crossing Malacca Strait[14] (Arunachalam 1993). The traders of India had landed at Srikshetra in Burma, Takkola, Kokkonagara, Kataha Kadharam in Malaya Peninsula, Sri Vijaya in Sumatra, Purva Kalinga in Java, Tonking in Cambodia and Kwang-fu in China for maritime trade.

Ships set sail to Bali, Java and Sumatra from the ports of the east coast of India and on return they sailed directly to Sri Lanka then to other ports of India. The merchants first went to Sri Lanka then to South-East Asian countries and returned through the same route because of favourable wind direction and currents during their journey. During the period from November to February, the monsoon winds blowing from the Northeast helped the ships to sail from the east coast of India to Sri Lanka and other South-East Asian countries. Similarly, from June to September, the Southwest monsoon wind blowing from southwest naturally helped a ship to return from South-East Asian countries via Sri Lanka to Tamil Nadu, Andhra, Odisha and Bengal. Mantai being located in the Mannar Gulf opposite Alagankulam and Korkai helped ships to sail from Tamil Nadu to Mantai then to proceed to South-East Asia. Mariners of the east coast were aware that it was a risk to sail between May and July-August in the Bay of Bengal particularly on a southward voyage. At the outset of Northeast monsoon from the month of October-November, it is safe for southward voyage. It is also possible to take more easterly route through central Bay as far as Andaman islands in the month of December. Sailing in February and March from Andhra coast through the Andaman or more southerly route through the 10^0 channel is preferred. Between November and April it is safe to run close to Nicobar than to sail for South-East Asian countries. In case of foul weather or gale and requirement of replenishment mariners searched for safe shelter in the nearby coast[15].

The journey during the Northeast monsoon can be corroborated with the regional festivals like *Kartika Purnima,* (full moon day of Kartika in the month of October-November) which is celebrated by the people of Odisha. For a long time this day was observed as the day of the commencement of their sea voyages to South-East Asia. The *Kartika Purnima* is celebrated as a remembrance even today by the people of Odisha who go to the nearby river bank, sea shore, pond and tank with votive boats made of banana tree barks and pieces of light wood and place lighted lamps, etc in it and float it symbolising a safe journey for traders. This day is celebrated as *Bali Yatra* (voyage to Bali Island) throughout Orissa.

Similarly, a festival is celebrated in Thailand named *'Loykrathong'* or *'Loy brah Prahdip'* in which ritualistic boats are floated in the month of December which is similar to those celebrated in Orissa and other parts of India.

Similarly, *Khudurukuni Osha* is celebrated in the month of September by unmarried girls of Odisha who used to wait for their brothers to return with wealth and gifts. This festival anticipates the return journey. Data of the social and religious festivals as well as wind and currents corroborate that the mariners of Odisha and east coast of India probably commenced their journey between October-November and February and returned between June and September[16]. The sailing routes between east coast of India and South-East Asia were largely dependent on wind, currents and sea conditions. In the absence of coastal landmarks throughout the coastline the sailing course depended on the aid of a few stars. The Ursa Major (*Saptarshi*) in northern horizon and Bado Daul Chukka (Suhali, Agastya and Canopus) in southern horizon were used during coastal sailing and *Kalapurusha* (Orion) and *Bail Mars* (Alpha Tauri) which rise and set due east and west respectively were used during crossing the open sea by the

mariners of Odisha. Whereas other mariners of the east coast used Pole star (Dhruva) and Constellations of southern hemisphere like the *Ottai Velli* (Agastya or Canopus) for crossing the sea. In those days a set of stars from different parts of the horizon were used varying from maximum to minimum numbers respectively for navigational purpose[17].

It is imperative to mention that seafaring activities,navigational skills,boat making tradition , traditional knowledge on wind direction and weather condition has a long history and deeply imbibed in the day to dy life of Odishan people.The evidences on marine activities as present in Odishan are yet to be studied in detail like that of similar researches carried out else where to draw ageneral picture of Indian Ocean archaeology.This would nodoubt paved way for a general understanding about the maritime past,trade linkages,material culture and the role of hinterland.Further scientific research on maritime heritage may unravel various hidden facedes of maritime history and culture of our State.

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2

HISTORICAL BACKGROUND

The State of Odisha has a glorious past and replete with ancient material culture dating back to the Pre-historic times. As an adaptive strategy, man during the prehistoric period had to live by the side of big rivers and other similar perennial supply of water and used the valleys of the rivers as a sort of thoroughfare for migration and was in search of fresh field and pastures. The broad and fertile valleys of big rivers like the Mahanadi, the Brahmani and other perennial rivers provided ideal conditions for the pre-historic people to live and migrate. We know that contact between two groups of people lead to diffusion of culture through exchange of ideas. The favourable environmental condition helped the prehistoric folks to roam freely in the hilly regions of Eastern India making contacts with each other and exchanging mutual ideas, as a result of which, we find the lithic industries in the upper reaches of the above rivers with their tributaries in the Chhattisgarh and Jharkhand, in close resemblance with those in their lower reaches in Odisha. Probably, the centre from which the diffusion started was situated somewhere at the

middle of this hilly area near Jharkhand and Odisha borders, and in due course spread in different directions[1].

We find this process from the excavated prehistoric sites like Golabai Sasan where the stratigraphy is very clear and throws light on the Neolithic period of Eastern India. Society and Culture is very clear from the cultural deposits of this site. On the basis of C^{14} dating, the dates are c. 2300-2100 BCE. for Neolithic Period, c.2100-1450 BCE, Chalcolithic period and c.1450-1100 BCE. for Early Iron Age[2]. Agriculture and other economic activities were initiated around 3500 BCE in this area with the help of both stone and bone tools. The Neolithic people of this region produced rice as evidenced from Nehena, another excavated site[3]. They domesticated cattle, sheep-goat in the initial stage. The recent archaeological excavations (2015-16) undertaken by the ASI at Suabarei near Pipili, on the bank of the river Daya also provides a clear stratigraphy of Odishan society and culture of 3500 BCE[4] onwards. Also Banka[5] (Harirajpur) near Jatani and Deltihuda[6] (Talagada) offer a chronology of the Neolithic/Chalcolithic culture of Odisha dating back to 3500 to 1000 BCE..

The significant development of society in Eastern India is known as the sites laid bare circular mud-brick structures from Khamesvarpali, Banka (Harirajpur) and Suabarei. The people lived in the Chalcolithic age domesticated animals and practiced agriculture. They reared cattle, sheep-goat, pig and buffalo, and hunted deer. Some animal remains have been identified as being either of elephant, donkey or wild ass. People produced both wild and domestic rice and cereals like black gram, mustard lentil etc. They knew fishing as fish hooks have been recovered[7].

The Chalcolithic people were generally not acquainted with burnt bricks, which were seldom used. Occasionally, their houses were made of mud-bricks, but mostly constructed with

wattle and daub, and seem to have been of thatched roofs. These houses show incipient settlement planning.

The household materials like bone tools, nails, fish-hooks, advanced pottery such as red slipped ware, black and red ware, fine grey ware and the shapes comprise of pots, bowls, dishes with or without stand. Pottery was made of well levigated clay and turned on a fast wheel ,well burnt with high temperature. Generally, graffiti marks comprising of geometric and non – geometric patterns have been found on the exterior surface of the pottery. Some specimen, particularly from Suabarei contains painted motifs[8]. Human skeletal remains have also been found from sites like Banka, Suabarei and Deltihuda as reported by the excavators which suggest that the dead were buried within the settlement like that of Deccan Chalcolithic sites which otherwise point to an advanced stage of rural economy. The agricultural economy slowly evolved into mass agricultural activities with the help of agricultural equipments. Assured food security gave birth to organized settlement system. These excavations proved that copper using people or Chalcolithic culture flourished in this part of India like that of other regions in North-Western part of India. These recent excavations have filled the cultural stratigraphic vaccum and hence a complete cultural sequence has been established.

The copper-stone culture is essentially of rural background. During its continuance, the supply of copper was limited. Though we find copper mines in eastern India, a few copper tools like blades, spatula, fish hooks, chisels, knives etc., has been found in the above Chalcolithic sites of Odisha and other neighboring states. Chalcolithic people in Indian context primarily used microliths like blades, bladelets, burins and various types of scrapers, and hammer stones. By itself, a tool made of copper was pliant. People were unaware of the art of

mixing tin with copper and thus forging the much stronger and useful metal called bronze. This historical phenomenon is seen in the birth of civilizations. Bronze tools facilitated the rise of the earliest civilizations in Crete, Egypt, Mesopotamia and also in Indus Valley[9].

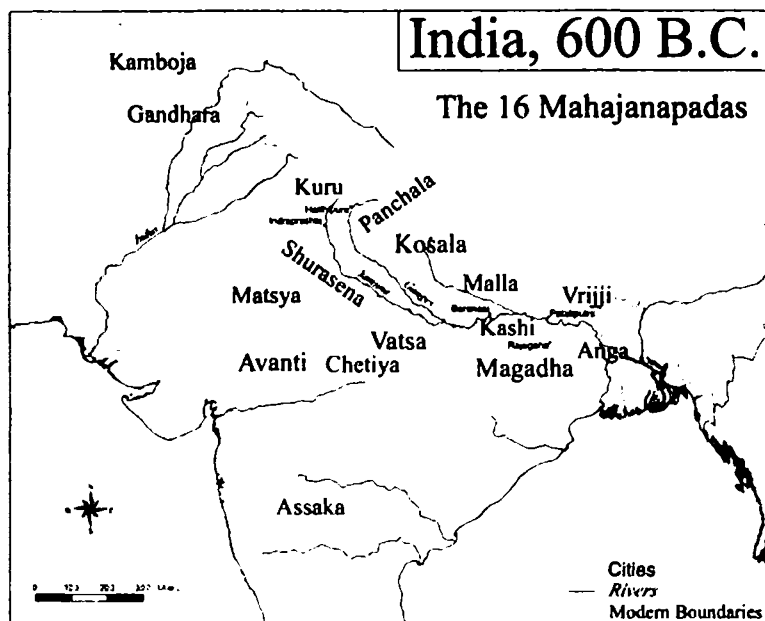
The next phase of development could be seen from the use of iron. Of course, the Indus Valley Civilization and Vedic Age have the continuation of development of social fabric but in the Odishan context we have the iron age preceding the Chalcolithic age as has been reported from Golbai. The Iron Age/ early Iron Age from Golbai excavations are dated between c.1450-1100 BCE[10]. In Indian Subcontinent, iron sometimes attributed to Lothal and to some sites in Afghanistan (Gunweriwalather) during the Harappan times (c.3500 to 1500 BCE)[11]. Neither of them, however, represents pure iron metal nor working in iron. They are really copper objects containing iron ores. These ores have not been separated from copper and given a distinct and separate identity as a pure iron metal. By c.1000 BCE, we are confronted by an India which has deep agricultural roots, long familiarity with the use of iron, distinct regionally oriented distribution of sites, a wide range of crafts and industries, an extensive net work of trade and many interacting geographical orbits[12].

The material culture in the post-Harappan/ Rig Vedic period (c. 1500-500 BCE.), for which we have copious literary evidence in the *Samhitas, Brahmans* and *Upanisads* (they represent a sort of transition from pre -history to history), is glaringly different and much less advanced. The long period can be divided into two distinct phases – Rig Vedic (c, 1500-1000 BCE) and Later Vedic (c. 1000-500 BCE). Rigveda, comprising ten *mandalas* (books), is widely accepted as containing two broad strata of historical layers, the earlier represented by books 11-V11 and the later by books 1 and V111-X[13].

Some scholars[14] are of the opinion that the compilation of the Rig Veda was taken up after c. 1700 BCE. in North-Western India by a section designated the Rig Vedic people (Indo- Aryans). After 1400 BCE. when the late Harappan culture (c. 1300 BCE.) were in decline, the Rig Vedic people eventually spread further east ward. Equipped with newly acquired iron technology, the people moved to the east of the Ganga (Iron Age c.1200-700 BCE, NBPW culture with full-fledged use of Iron). The migration was not in a single process but in phases. The first entrants were the PGW (Mahabharat) people, the Puru-Bharat, who settled close to Yamuna[15]. The Iksuvakus, the inheritors of the Ramayana, came later and moved further eastwards, during their migrations, they also carried with them not only their religious beliefs, rituals and hymns but also place and river names which they selectively reused.

In India, pure iron at some sites in Rajasthan in the copper-stone age have been reported and also in Karnataka towards the end of that phase. Iron can thus be placed in the 2nd half of second millinium BCE[16]. Around c.1000 BCE iron was used in Gandhara area in North Western part of India. Iron implements buried with dead bodies have been discovered in substantial quantity[17]. They have also been found in Beluchistan plataeu. About the same time, iron was used in eastern Uttar Pradesh, Madhya Pradesh and Rajasthan, of course now evidences are emerging from Odishan sites also. This process slowly and gradually transformed into early historical state formation towards 600 BCE.

The Mauryan state was the outcome and culmination of a continuous process of state formation in the extended Gangetic plains, a process which Romila Thapar designated as 'from Lineage to State'[18]. It passed through several distinctive phases of development from Vedic chiefdoms and *janapadas* to the



post-Vedic early kingdoms of the *Mahajanapadas* and their fierce struggle for supremacy, which led to the rise of Magadha and finally to the foundation of India's first trans -regional state under the Nandas. The Pali texts are familiar with 'sixteen great states' (*solas mahajanapadas*) and their role in providing the necessary impetus to the re-emergence of urban centers and wide disposal of monetary economy in the form of punch-marked coins is duly recognized .These states generally located north of the Vindhyas. Their broad chronological spectrum would be between c.500 and c.300 BCE[19].(.However, the recent numismatists have amplified the argument of *janapada*-punch-marked coins' link, identified several pre-Mauryan /Asokan punch-marked coins and enumerated some new *janapadas* with a chronology. Their listing includes Andhara (c.500-350 BCE), Asmaka (c.500-350 BCE) Kalinga (c.500-260 BCE),Kuntala (c.600-450 BCE),Malla (c.550-320 BCE),Vanga (c.550-500 BCE),Sakya (c.600- 500 BCE),Saurastra (c.450-300 BCE)[20]. Some of these *janapadas* are

included in the early as well as expanded list of 25 ½ states in the Jaina texts .Evidently, these expanded lists locate some *janapadas* south of Vindhyas too[21].

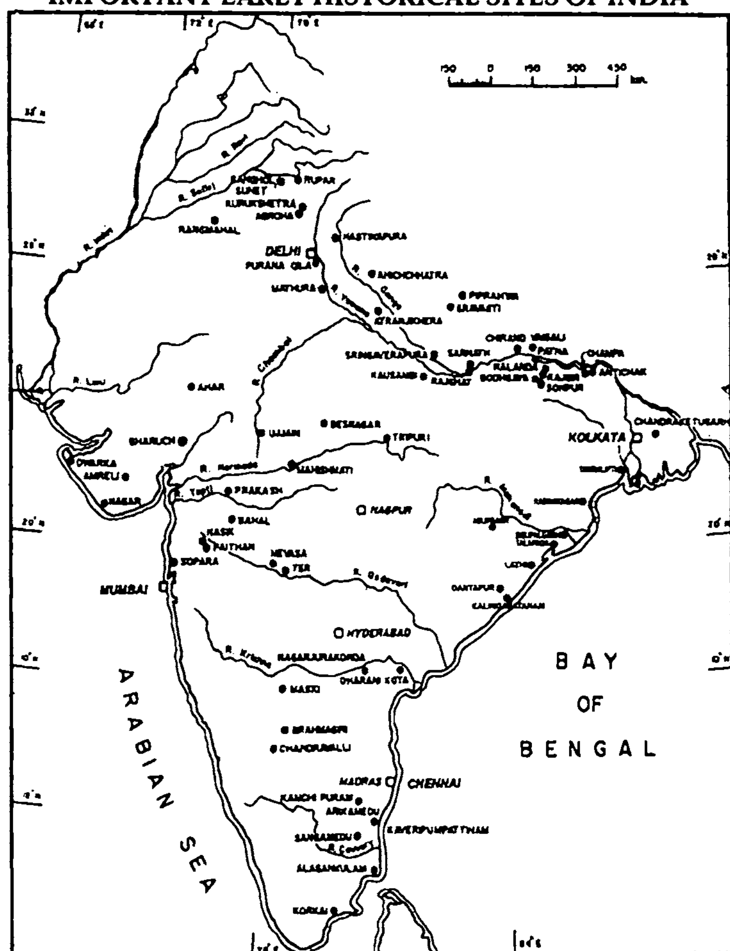
Coming to the state formation, in the fourth century BCE, parts of present Odisha, then known as Kalinga,Utkala,Odra, was included in the Magadhan empire under the Nanda dynasty (369-324 BCE). The capital of ancient Kalinga was Dantapura which is referred frequently in Pali literature. Kalinga (ancient Odisha) was conquered by the Mauryan emperor Asoka in 3rd century BCE. The headquarters of Asokan rule in Kalinga were at Tosali and Samapa. There were viceroys posted at Ujjain, Taxila, Tosali, and an *aryaputra* (high governor) in the Deccan during the Mauryan period[22].

Gradually, ancient parts of Odisha was known variously as Utkala, Odra, Tosala and Dakshina Kosala. But Kalinga raised its status to a great height of prosperity which could equally be comparable to the prosperous city centers of that period like Rajgriha, Taxila, Vaisali, Pataliputra, Ujjain, Kausambi, Champa etc. Kalinga remained as a powerful geographical entity till 6th-7th century CE. The material culture of Odiśha and neighboring areas which were discovered from the recently excavated early historical sites such as Tamralipti Sisupalgarh, Jaugarh, Narla-Asurgarh, Kharligharh Lalitgiri, Langudi, Radhanagar (Kankia) and further south Kalingapatnam and Salihundam (Telengana) have enough evidences to prove the fact that the early historical settlements marked with availability of iron technology, Black and Red ware, NBP, and Red Slipped ware together with fortifications, gates, mud and burnt brick and laterite structures, tiles and punch-marked coins[23].

It is thus clear that at least from 4th-3rd century BCE onwards the settlements as that of *mulanagara* with fortification and use of various types of pottery such as Black and Red ware,

Red Slipped ware and in some cases NBP and advancement of iron technology as well as introduction of coins show its wide contact and interaction with other city centers of the Ganga valley[24]. During 3rd century BCE, Kalinga region was known to have had a glorious maritime tradition and assuming that this maritime history goes back to the Mauryan period and even earlier. The Mauryan state under Asoka would naturally intended to have it incorporated. Kalinga straddles a very important position in ancient India's geography route. It controls the route to the south along the coast, and equally important, it controls the route which comes down from south Kosala along the Mahanadi. With Andhra and the upper segment of Odisha's coast in its possession, the Mauryan state could not afford to keep Kalinga unannexed[25]. (Chkravarti, p.31). Perhaps, this is the reason that Mauryan Emperor Asoka had waged a war against Kalinga in the eighth regnal year in 261 BCE. The war of course, brought misfortune in material culture but the cities like Tosali and Samapa become centers of royal activities. So also it was a turning point in the course of Indian History as Emperor Asoka accepted Buddhism and patronized it soon after Kalinga war. The remarkable event perhaps memorized by the carving of forepart Elephant figure above the Asokan Edict at Dhauli which again an earliest sculpture in stone in India signifying essence of Buddhism. Another such elephant figure is there at Kayama hillock being surrounded by several early Buddhist sites. Emperor Asoka's Rock Edict XIII, states that when he embraced Buddhism, he indulged in spiritual conquest saying that ' the war drums are now replaced by the drum of *Dhamma*'. Some scholars say that king Asoka, was trying to emulate the example of a righteous 'universal monarch' (*Cakkavatti raja*) as depicted in the Buddhist texts. Elsewhere, the Buddha said : "it was possible to rule a country in accordance with *dhamma* without resorting to harsh punishment. The universal monarch who

IMPORTANT EARLY HISTORICAL SITES OF INDIA



is called a 'king of righteousness' governs his country as a model state in which there is both economic prosperity, as well as righteousness".

The sending of the missionaries soon after the conclusion of the third Buddhist Council was associated with the concept of *Dhammavijaya* i.e., conquest through *Dhamma*, the policy in the post–Kalinga war phase. The Rock Edict XIII is quoted in support of this view, where, Asoka declares that true conquest is conquest by pity or virtue and he claims such a conquest

since he believed that his *dhamma* policy had been accepted beyond the frontiers of his own kingdom. The king explains that he is still honoring all sects, however, he considers the 'progress of essential doctrines of all sects 'as the highest honour'. This 'progress' lies in toleration, not a passive co-existence but inactive frame of mind in which opinions are expressed in a manner that does not cause any offence. The realization exhibited tremendous effect on Asoka after Kalinga engagement[26].

However, the Relic Caskets from an early Stupa and the Chaitya discovered at Lalitgiri from the earliest phase belonging to 3rd -2nd century BCE[27] points the firm footing of Buddhism. So also the discovery of a pendant (seal) with inscription *Sadabhu Tissa* (2nd century BCE) from Radhanagar (Kankia) again upholds the theory of expansion of Buddhism and its popularity[28]. Expansion of Mauryan rule towards Eastern India indirectly broke down the economic barriers and political isolation of Odisha from the rest of India and as such stimulated both oceanic and inland trade. The artisans and merchant families in the villages contributed to the emergence of Janapadas like Dantapura and Kalinganagara and port towns like Pithunda being encouraged by royal patronage. Of course, the towns were no other than cluster of villages. In Indian context some villages are described in textual sources as specialized in professions such as blacksmithy, pottery-making, carpentry, cloth weaving and basket making and so on. These were the villages close to the right type of clay for instance, would attract potters to a particular area, carpenters would flock to the place where timber was available. Specialized artisans tend to congregate because this facilitated access to resource and distribution of craft items. Such a concentration could evolve into a town and towns in turn expanded their production and markets to become commercial

centres[29]. The towns and commercial centers where monks and merchants gathered which ultimately supported for the propagation and consequent expansion of Buddhism. Some of these towns and commercial centers like Vidisha, Champa, Paithan, Sopara, Toshali and Samapa were the epi-centers for the expansion of Buddhism. It is certain that Buddhism witnessed its growth in this part of India as that of the Ganga Valley. One of the major factors for the growth of Buddhism is the maritime trade and cultural expansion throughout Asia[30].

This promoted the immigration of the artisan classes from hinterland of tribal and village units to the religious and commercial centers. Trade centers like Palura, Pithunda, Kalinganagar and Tamralipti were great emporiums of the Orient developed having vast contact with the outside world, with a free competitive enterprise as the motive force behind the economy[31].

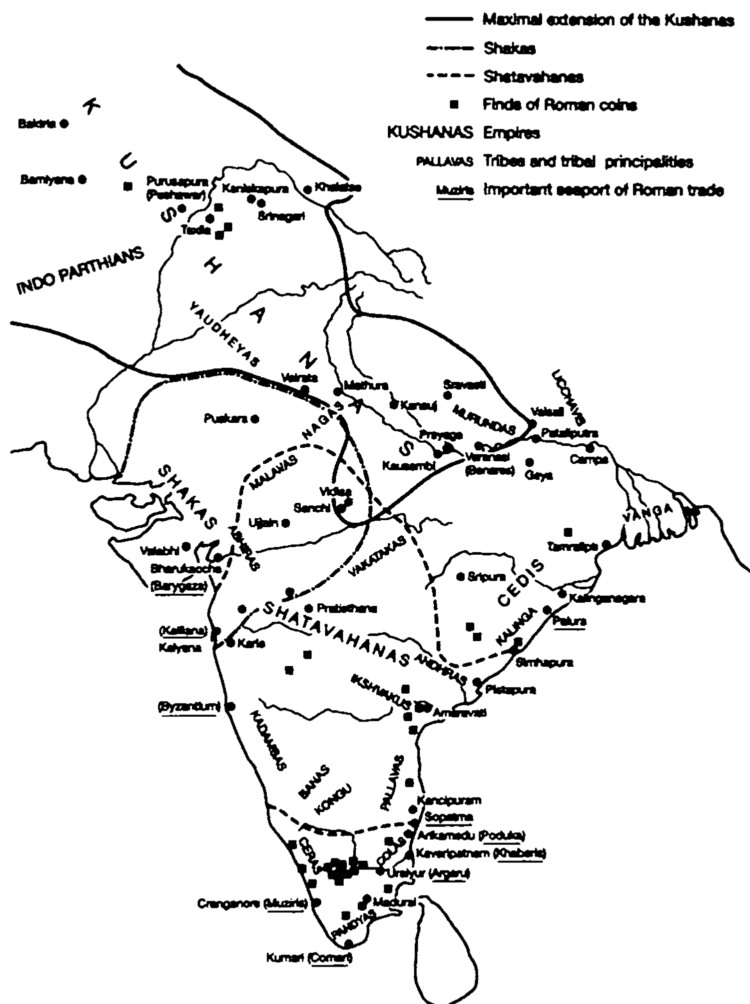
Following the collapse of the Mauryan Empire in 185 BCE, numerous successor states emerged across India. In the Gangetic Plain ,the Mauryan Empire was followed by a succession of states, including the Sungas (185-73 BCE) and the Kushans (1^{st}-3^{rd} centuries CE),In South India ,the Stavahanas controlled large areas between the 2^{nd} century BCE and 2^{nd} century CE. In eastern India ,the Kalinga re-established themselves as an independent state after the collapse of the Mauryas. As illustrated in a long inscription by the Kalinga King Kharavela (2^{nd} -1^{st} century BCE),later kings throughout India presented themselves in roughly the same way that Ashoka had –listing their conquests, good deeds, and professing support for all faiths within their territories[32].

Politically, the north Indian plains dominated for about a century and half by the Sungas and Kanvas after the fall of the Mauryan Empire. The north-western parts, particularly the

boarder land witnessed a series of invasions by the Greeks, Bactrians, Indo-Greeks, Sakas and the Kushans and the last mentioned power, was the most formidable. In the Deccan and Kalinga (Odisha and adjacent areas) rose the Satavahana and the Mahameghavahana dynasties respectively[33]. The far south witnessed the arrival of a number of powerful chief-ships which were yet to blossom into full-fledged monarchies. Outstanding among these chief-ships were Cholas in the Kaveri delta, the Pandyas in the Tamrapani and Vaigai valleys and the Cheras in Kerala.

The rise of the Andhra Satavahanas and the Cheti (Chedi) Mahameghavahanas seem to be synchroneous events in history and it was possible because of the decline of the Sunga-Kanva powers. It may be that in c.73 BCE Simuka murdered the last Kanva ruler Susarman and destroyed the remnant of the Sunga power, the grand father of Kharavela who was probably known as Mahmeghavahana established his authority in Kalinga and laid the foundation of the Cheti (Chedi) rule, which ushered in a new chapter in Odishan history[34]. Thus the Kalinga Empire was re-established in the first century BCE., by the Mahameghavahanas and its glory was revived by emperor Kharavela, the third ruler of the dynasty. The Hatigumpha inscription reveals that the sphere of influence of Kharavela had extended from Mathura on the north to the Pandya Kingdom in the south and to the territories of Rathikas and Bhojakas i.e. Maharashtra region in the west. But he did not annex any land of other countries and Kalinga under him was confined to its traditional boundaries from the mouth of the Ganges to the Godavari. This, however, proved to be the last flicker of imperial glory of Kalinga.

The history of Odisha (Kalinga) in the first century CE is much obscure and little is known about the political life of the territory till the ascendency of the Satavahanas early in the

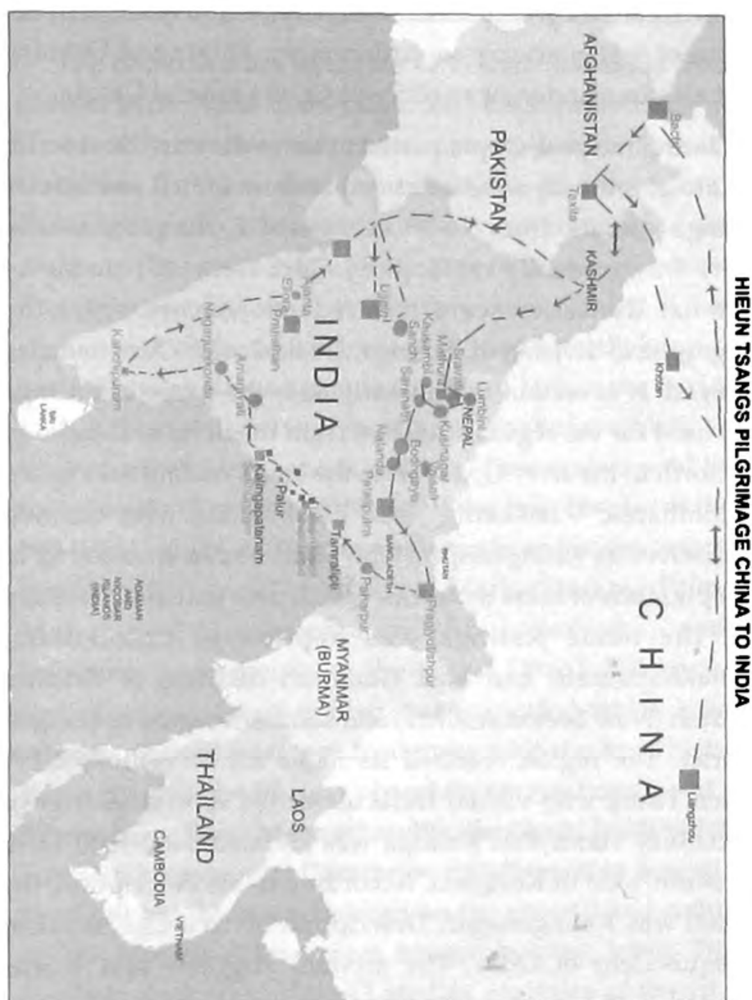


India c. AD 0-300

second century BCE- second century CE). The excavations at Sisupalgarh, Lalitgiri, Manikapatna and Radhanagar (Kankia) in coastal Odisha yielded items of daily necessities (including pottery and iron objects) and ornaments which could have been produced locally. Of the natural items of commerce one may refer to the elephants (Arthasastra II.) and ivory. In the first century CE the author of the *Periplus* heard of the ivory of Dasarne, by which he denoted coastal Odisha i.e., Kalinga/

Utkala of the period concerned[35]. Among other saleable natural produces were coconut and betel. The result of these excavations show the existence of fairly developed urban settlements and economy which would presuppose the existence of inland and trans-oceanic trade network. The Excavations at Manikapatna yielded pottery types such as roulette ware, knobbed ware, stamped ware, kaolin ware, a sherd bearing Kharosthi script with a legend *Dastradeva* and *Khida*, from the level datable to 1st to 5-6th centuries CE[36]. Several of these materials are comparable with similar objects found from Chandraketugarh and Tamluk areas of West Bengal. Manikapatna was identified as city of Palura which was mentioned by Ptolmey. Further, the gold medallion discovered at Sisupalgarh which is datable to 3rd century CE, bears the name of one *Dharma-Damdhara*. To substantiate the evidences the Roman clay bullae found from Sisupalgarh and Radhanagr (Kankia) also point to feasibility of contacts of the merchants of ancient Odisha with far of Roman world. The numismatic evidence like the findings of Punch-marked, Puri-Kushana and Silver coins have been discovered from Asurgarh (539),Salipur (379),Pandia (334),Lalitagiri (65),Radhanagar (19),Kayma (13) and several hoards have also been discovered from Bhubaneswar, which all prove that the sites were in trade circuit. Scholars have tried to classify the punch-marked coins into imperial as well as local or Kosala type which are earliest coins constitute the first currency system from 4th century BCE and were in use up to 4th century CE[37]. From 3rd century CE onwards we find imitation of Kushan coins in copper abundantly mostly found from Buddhist as well as Maritime heritage sites are the indicators of trade and regional interaction.

Epigraphic evidences from north and central Odisha indicates the persistence of some forms of Gupta suzerainty


HIEUN TSANGS PILGRIMAGE CHINA TO INDIA
CHINA
AFGHANISTAN
PAKISTAN
KASHMIR
INDIA
NEPAL
Lumbini
Kusinagar
Bodhgaya
Nalanda
Kalingapatanam
Palur
Tamralipti
Pragjyotishpur
MYANMAR (BURMA)
THAILAND
LAOS
CAMBODIA
Kanchipuram

in the area after decline of Gupta empire in northern India around the middle of sixth century. The Nalas ruled in Bastar-Koraput areas during this time so also Sarabhapuriya kings established their rule in Daksina Kosala in fifth century CE and succeeded by Panduvamsis in sixth century CE[38]. In the course of first quarter of seventh century Uttara and Dakhina Tsohali came under sway of Sasanka, the king of Gauda.

During the post-Gupta period at times the north and south of Kalinga were separate states and at times united. Sometimes Kalinga –Utkala from 6th -7th centuries CE, the geographical entity was gradually replaced by Odra Desa. A Number of regional dynasties were tattered up. Accordingly, the geographical division of Kalinga,Utkala,Tosali Odra had also changed. It is certain that in early ages the name of Kalinga was used for the region stretched from the delta of Ganges in the north to the river Godavari in the south during the regime of Matharas, Vasishathas and Pitribhaktas who claimed themselves as *Kalingadhipati*. The place names mentioned in the epigraphs of these dynasties also denote that in 5th century CE, the name Kalinga was applied to Srikakulam, Vishakhapatnam and East Godavari districts of Andhra Pradesh (Now Seema Andhra) and southern region of Ganjam district. The region retained its name till 7th century CE.[39] Hiuen Tsang who visited India about the second quarter of 7th century states that Kalinga was situated 1400-1500 Li to the south-west of Kongoda. According to his description, the capital was Kalinganagar. Description of Wu-Cha, is taken as equivalent of Odra. The account suggests that it was situated to the south-west of Karnasuvarna and to the north of Kongoda. The kingdom of Sailodbhavas was known as Kongodamandala which was independent, sometimes it was feudatory to a more powerful neighbour. The historical geography of Odra-Utkala-Uttara Toshali in the latter half of

7th century is not clear[40]. The Sailodbhavas consolidated their rule in Kongoda. The rule of later Guptas came to an end in about 725 CE., as a result of the invasion of Yasovarmana of Kanauj. After this the Bhaumas rose to power and established the kingdom of Toshala in the middle of 8th century CE.

The Bhauma-Kara kingdom of Toshala extended from the Ganges in the north to the mountain of Mahendra in the south. It was divided into two parts, namely Uttara Toshali and Dakshina Toshali. The capital of the Bhaumakaras was Guhadevapataka on the bank of Baitarani near Jajpur. Although Bhaumas originally belong to Utkala and described themselves as Utkala-Kula, yet they concentrated in Toshala region with their capital located in it and partly because the early Bhauma Kings being followers of Mahayana Buddhism and a fascination for the name Toshala which was a stronghold of Mahayana Buddhism. These rulers paid tribute to Devapala (810–850 CE), ruler of the Pala Empire of Bengal, but Utkala regained its independence from his successors. The temples like Vaital, Sisiresvra, Markandesvra, Talesvara, Mohni and Uttaresvara of Bhubaneswara, and the Vahirangesvara temple at the top of Dhauli hill have been stylistically assigned to Bhaumakara period which has close affinity with the art motifs of these with the Buddhist art of Ratnagiri, Udayagiri (late phase),Solampur,Boudh and some other places. Some of the art motifs like *Nagas,* holding foliated vases in both hands, *Dvarapalas* standing cross legged with their left hands on staff placed on the ground and right ones on the hip, Avalokitaesvara images holding lotus, Triratna symbols on the pedestal of Lakulisa are some of the art traits that found in both Brahmanical and Buddhist monuments of the period. The introduction of *pancharatha* style and the side deities (*parsva-devatas*) enshrined inside the niches on the exterior walls of the temples of this period was a technique evolved in the Bhumakara period[41].

In the second half of 9th century CE, Janamejaya I, the Somavamsi king of South Kosala occupied Khinjali Mandala which was a feudatory State of Toshala in the district of Boudh. As it was an integral part of ancient Odra country, the Somavamsis called it Odradesa. Yayati I, son of Janmajeya built his capital Yayatinagara on the banks of Mahanadi in Odradesa most probably at Vinitapura identified with modern Binika. In the middle of 10th century, the Somavamsis occupied the entire Bhauma kingdom and organized an extensive empire, Uttara Toshali of the Bhaumas came to be known as Utkaladesa. During this period the Jagannath Cult gained its momentum. The earlier foundation of Vishnu-Narasimha worship as known from Lakshmana temple at Sirpur with an invocation to Lord Purusottam in the inscription of queen Vasata[42] perhaps, gradually got its wider acceptance. This phenomenon of Lord Vishnu (Hari) and Lord Siva (Hara) the juxtapose God could be marked from the temples of Gandharadi near Boudh and Lingaraj temple at Bhubaneswar, both are Somavamsi monuments. Again, Yayati II consolidated the provinces of Kosala and Utkala. He probably built a capital of Utkaladesa on the bank of Vaitarni and called it Yayatipura (Jajpur) after his name[43]. About 1070 CE. South Kosala was conquered by the Telugu-Chodas. It may be mentioned here that the Somavamsis united South Kosala comprising Sambalpur-Sonepur region with Toshali or Utkala area of Cuttack,Puri, Balasore, Keonjhar, Dhenkanal, Boudh-Phulbai and Kalinga region extending to north Andrha Pradesh. Thus, they amalgamated upper Mahanadi valley with Utkala kingdom of Bhaumakaras and later added southern portion of Kalinga region and contributed to the political unification of Odisha[44].

The Somavamsis followed a policy of reconciliation towards Buddhism. Banapur has yielded large number of

Buddhist bronze images from where the copper plate grant of Somavamsi ruler Indraratha has been discovered. Indraratha had issued a land grant to a female Buddhist deity called Khadiravani Bhattaraka. The Somavamsis were great patrons of art and architecture. The temple building activity attained maturity and adorned with lavish sculptural ornamentation. The *mukhasala* became an integral part of the temple as a full-fledged *pidha* temple with pyramidal roof instead of being rectangular structure. These characteristics of the porch continued to be a leading feature in the subsequent ages. The notable temples assigned to Somavamsis are the Muktesvra, the Rajarani, the Brahmesvara, the Lingaraja, the Ekamresvra and the Dakara Bhimesvra at Bhubanesvar and the temples of Kosalesvara at Baidyanatha near Sonepur, the twin temples of Siddhesvra and Nilamadhav at Gandharadi near Boudh etc[45].

For a period, the rulers of Utkala were forced to acknowledge the suzerainty of the Tamil Chola dynasty under king Rajendra Chola I (1012–1044 CE), with whom they became allied by matrimonial relationship. In the Prasasti of Mukhalingam grant dated to Saka Era 1030 i.e., c.1108 CE, Anantavarman Chodagangadeva was credited with reinstallation of *Utkalapati* in the east and lord of Vengi in the west[46]. He was an ambitious ruler who wanted to extend his kingdom. Several inscriptions, copper plate grants such as Ratnagiri Charter, Gandibedha fragmentary stone inscription, Mukhalingam inscription, Vizagapatnam plates, Yambaram grants, Lingaraj temple inscription and Khillesvara inscription indicates the steady process of consolidation of Ganga power in Odisha. According to Kendupatna and Nagari plates, Chodaganga mobilized his victorious army into further north and destroyed the city walls and gate ways of a fortified city of Aramya. He fought against the Southern

Regional Kingdoms of the early middle Ages
(c.900-1200)

kingdoms and West Bengal, and occupied all the territories up to the Hoogly. He made alliance with Vijayasena, the Sena king of Bengal. The river Hooghly became the border line between the Ganga kingdom and Sena country[47].

The western Odisha, then known as a part of Daksina Kosala was being ruled by Telugu Chodas. Jajalladeva I, the Kalachuri King is credited with the victory over Daksina Kosala, Lanjika, Khijjinga, Khimidi etc. Daksina Kosala was conquered and annexed by Jajalladeva I after defeating the Telugu Chodas King, Somesvara III. Anantvarmana Chodaganga became alert about the territorial expansion of Jajalladeva I and shifted his capital from Kalinganagara to

Yayatinagara by 1114 CE, to check Jajalla I's further eastward advance[48]. Afterwards Chodaganga invaded Kalachuri kingdom to recover the Balangir-Sambalpur region. But he could not succeed. The Sambalpur-Sonepur region continued to be the occupation of the Kalachuris till the reign of Anangabhimadeva III (c.1216-1235 CE).

After regaining independence, Anantavarma Chodagangadeva (1078 CE) established control over a wide region from the Ganges to the Godavari, moving his capital from Kalinganagar to Varanasi Cuttack or Cuttack. Like his forefathers Chodaganga was a Saiva in his earlier life but after his occupation of Odisha, he became a devotee of Jagannath and built a magnificent temple at Puri which stands till now and bears the symphony of art and culture since 12th century CE. Chodaganga built number of forts in Odisha of which Jajpur, Amaravati (near Chhatia), Choudwar and Sarangagarh (near Barang) became most famous. The imperial Ganga period in Odisha is the longest ever which stretches c.1038 to 1434 CE. The Vizajpatnam charter of 1118 CE,[49] decorates Chodagangadeva, with the title of the Lord of the entire Utkala empire (*Sakalotkala-Samrajya-Padavi-Virajamani.............. sindurapora*). Chodaganga has been considered to be the most powerful king of his time. Ruling for 72 years, he was responsible for a strong Ganga kingdom in Odisha which was survived longest ever for 325 years.

The cultural interaction between Odisha and South East Asia during this period is reflected through the standing monuments of Angokar Wat in Funan (Cambodia) witness the concept of Meru in temple building as also the Devaraj as well as Pancharatra system prevalent in centers like Angoker Wat[50] as also in Sri Jagannath temple Puri. There was also a close interaction among various religious establishments among the religious centers like Puri, Bhubaneswar,

Kanchipuram which has close cultural and religious affinities with the establishments of Angoker Wat and Borobodur. Though the political arena was different owing to different dynasties like the Cholas and Khmer republic as well as the Gangas. History has witnessed protracted struggle among various kingdoms to establish their supremacy. However, this field of research has not yet been thoroughly investigated. There are sufficient evidences which delineate about the cultural and political interaction which are yet to be unfolded. This area of research, no doubt involves very interesting facets of cultural interactions, historical developments as well as overall aspects of linkages which will unravel the pivotal role played by the Oishan people.

The next powerful ruler of Gangas was Anangabhimadev III (1216-1235 CE) who waged a war agianst the Kalachuris (also known as Caidyas and Haiyas) and occupied the Sonepur-Balangir-Sambalpur up to Ratanpur. There was also a fight to protect Odisha from the hands of Muslims. The *Madalapanji* states that this Ganga king was a great devotee of Jagannath. He regarded Jagannath as the Lord of Odisha and himself as his deputy. The next great ruler of Ganga dynasty was Narasimhadev I (1234-1245 CE).The first and foremost activity was to fight against the Muslims and protct northern frontier. Narasimha's campaigns in Bengal were boldly conceived and brilliantly carried out[51]. His kingdom again extended from the Ganga in the north to Godavari in the south. He was the builder of great Sun Temple at Konarak. the next Ganga rulers from Bhanudeva I (1264-1278 CE) to Bhanudeva IV (1414-1434 CE) ruled Odisha but always engaged in warfare to protect the land from the hands of enemies like Muslims, Reddis and Sultans, and finally succeeded by the king Kapilendradeva of Solar (Surya) dynasty.

According to *Madalapanji*, Kapilendradeva was crowned at Kritivasa Kataka i.e., Bhubaneswar. Soon after his coronation, Kapilendradeva started the task of empire building in the midst of great difficulties confronted the invasion of Muslims and Sultans from Bengal and Devaraya II of Vijayanagar. From the date (1435 CE) of his coronation at Bhubaneswar an Era was initiated which is known as *Kapilabda* and finds mention in Odia calendar. He holds three titles viz. *Rauta, Mahapatra,* and *Brahmaravara.* It is a fact that the Odiya literature was at its apex as known from the writings of great poet Sarala Dasa who was contemporary. The three of his books *Vilanka Ramayana, the Mahabharata* and the *Chandi Purana* are the best literary creations. Out of these, *Mahabharata* describes about the state of Odisha and Lord Jagannath. The *Adiparva* describes the manifold prowess and qualities of the lord Jagannath. The poet refers that Maharaja Kapilesvara (Kapilendradeva) had made innumerable offerings and many a salute to the great Deity . The official charter began to be written in Oriya language .The Oriya kingdom was referred in the inscription as Udisa rajya. [52].

In the epigraphic records, the name of the founder of Suryavamsi dynasty appears as Kapilendra and Kapilesvara. He fought boldly against the Muslim rulers of Gaur in Bengal and protected the kingdom up to Ganga in south West Bengal. He also fought with the Reddis of Rajahmundry and brought under his sway before 1448 CE. Further, he also succeeds conquering the Kondavidu, Telingana and Vijayanagar empire. But towards close of his reign Kapilendra suffered from the loss of territories both in north and south. The epigraphic sources say that his son Purusottamdeva started his reign from 1467 CE. and ruled up to 1497 CE. It is said that he was nominated as successor by his father and it was given out that Lord Jagannath had commanded Kapilendra in a dream

to chose Purusottama as his successor. Purusottama strengthened his position in Odisha so firmly that his rival Hamvira could not oust him from it. He recovered all the southern territories and occupied Krishna-Godavari Delta. Odishan traditions persistently refer to the conquest of Kanchi by Purusottama and elaborately described by historians. The next successor was Prataprudradeva who ruled from 1497 to 1540 CE, and inherited a kingdom stretching from the Ganges to Pennar. He brought Kondavidu and Udayagiri *rajya* under his dominions in the later part of his life[53].

The Portuguese traveller Nuinz gives an account of the invasion and fighting of Prataprudradeva with kings of Vijayanagar particularly Krishndevaraya[54]. It is known from Kommuru inscription that Krishnadevaraya invaded as far as Katka of Oddadi kingdom. Krishndevaray also visited Puri and had *darshan* of the Deities. Unable to resist, Prataprudradeva sued a peace treaty and had given in marriage his daughter, Jaganmohoni alias Tukka to Krishnadevaraya. The reign period of Pratparudradeva was eventful and always engaged in warfare and made Kondapali near Vijawada as his southern provincial headquarter. The history of last part of Prataprudra was not clear and perhaps breathed his last in between 1538 to 1540 CE. With his death the rule of Suryavamsis came to an end with usurpation of Govinda Vidyadhara.

Govinda Vidyadhara, a general of Prataprudradeva murdered the Gajapati princes Kaluadeva and Kakharudeva and ushered the throne of Odisha. The inscriptions found in Laxmi-Narasimha temple at Simhanchalam referred him as Suvarnakesari. The dynasty he founded is called the Bhoi dynasty. From 1540 to 1560 CE, there were chaotic conditions in Odisha as there were no powerful ruler till the rise of Mukundadeva in 1560 CE who belonged to Chalukya dynasty.

The Srijanga inscription of Achyutabaliar Singh mentions Chaluki Mukundadeva probably hailed from Telengana for which he is called Telenga Mukundadeva[55]. The inscription on the Bhimesvara temple at Draksarama indicates that Mukundadeva was in possession of the southern part of the Gajapati kingdom up-to the river Godavari. It states that Mukundadeva defeated the king of Gauda and then performed *Tulapurusa* (the ceremony of weighing against gold) and other ceremonies, he remitted tax on marriages. This inscription provides the clear evidence that Mukundadeva's kingdom extended up to Triveni in the north before 1567 CE[56]. A flight of steps constructed on the Ganges at Triveni (in the Hooghly district), which is known as Mukundaghata corroborates the above epigraphical evidence.

He maintained the Gajapati Empire to a great extent but was involved in politics of Bengal for which he made diplomatic relations with the Mughal emperor, Akbar. But when the Sultan of Bengal, Suleiman Karrani attacked Oidsha, Akabar was engaged in the siege of Chittour and could not extend any help to Mukundadeva and ultimately Odisha was invaded. Mukundadeva bravely fought with the Muslim army at Kotasimul on the western bank of the river Damodar in the Hoogly district of Bengal. At this juncture Ramachandra Bhanja, the commandant of Sarangagarh declared himself to be the king of Odisha, and again there was a fight in which he was killed. This tradition is recorded in the *Madalpanji*. Another tradition records that Mukundadeva fought with army at Gohiritikira and was killed in the battle[57]. Although the reign period is only for eight years still he was the master of Gajapati kingdom in the north from the river Gnges to south up to the river Godavari. The tradition of Kalapahar referred to in the *Madlapanji*, who had done lot of damages to Hindu temples during this period[58]. The foreign travellers like Saeare

Fredericke and Tieffenthaler praised the king as an able ruler[59]. Mukundadeva considered as the last Hindu king of Odisha. In 1586, the Muslim ruler of Bengal, Sulaiman Khan Karrani succeeded in conquering the land, ending its independence. Odisha was subsequently ceded to the Marathas in 1751 and came under the British rule during the second Anglo-Maratha war (1803–1805).

The Mughals ruled Odisha for little over a century. 17—) During Aurangzeb's rule, however, a revolt was started under the leadership of Raja Krishna Chandra Bhanja of Mayurbhanj but was suppressed. After Aurangzeb's death, when the Mughul Empire declined, Odisha was brought under the rule of independent Nawabs of Bengal. In 1741, the Bhonsala Raja of Nagpur invaded Odisha under leadership of Bhaskar Ram (Pandit). Alivardi Khan, the Nawab of Bengal was compelled to cede Odisha to the Marathas whose reign lasted until the British occupied it in the year 1803[60].

Within two decades of Vasco de Gama's discovery of the sea-route to India, the Portuguese had established a flourishing trade mart at Pipili (Balasore) at the mouth of the river Subarnrekha. The English had established trade settlements at Haripur and Balesore by 1633.In subsequent years, the Dutch, the Danes and the French appeared at Balasore and established a stronghold. In 1757, when the Battle of Plessy was fought and own, the legal title of the Nawab of Bengal,Bihar and Odisha passed on to the English. In 1765 Shah Alam granted the East India Company, the *dewani* of Bengal,Bihar and Odisha. But this Odisha was only a small territory to the north of Subarnarekha. Lord Wallesley (1798-1805) asked the Bhonsala Raja of Nagpur to enter into 'subsidiary alliance', but the Raja refused. The Anglo-Maratha war resulted in the British conquest of Odisha in 1803[61].The British Government took many such arrogant and anti- people

policies and confiscated Khurda Estate. As a result, Paika Rebellion was started under the leadership of Bakshi Jagabandhu Bidyadhara, the military chief of the Raja of Khurda. In April 1817, Puri fell to him and the British retreated to Cuttack. In the end, however, the rebellion was quelled[62]. In 1857, Sambalpur played a leading role in the Mutiny under the leadership of Surendra Sai. The worst evil of the British administration was witnessed in 1865-66 during 'Na'anka' famine in which more than ten lakhs people comprising about a quarter of then Odisha's population died of starvation[63].Before that great famine occurred during Maratha period in 1770,1780,1803.However, the worst ever one was in 1865-66 which was discovered suddenly in May 1866, that there were no sufficient food grains in the market to feed the prisoners and Govt. Officials. Importation of grain by sea had become impossible as the southern monsoon had started and Odisha was totally isolated from the rest of India, as the only road to Calcutta and Madras was with out any bridges and unmetalled. Nearly 1000,000 people died of starvation and diseases. The Government succeeded in importing 10,000 tones of food grains only at the end of November[64]. (R DB ,HO,p,589).Puri District was more severely affected, ofcourse, Balasore and Cuttack was also felt. Early in 1866 the poorer people started plundering houses of their richer neighbors and began to flock into the town. Although Government succeeded in importing rice by ships in June but this was interrupted in the middle of July. Distress was not revived till the new crop was available in the market.

The Oriya identity was expressed in the post "Na Anka" famine phase through such vernacular news papers and journals as *Utkal Dipika, Smabad Bahika, Utkal Darpan, Utkal Putra and Sambalpur Hiteshini.* The first remarkable manifestation of Oriya nationalism took place as a reaction to

efforts made by some Bengalis to abolish Oriya language.

In 1869, Umacharan Haldar, a Bengali Deputy Inspector of Schools advocated the replacement of Oriya by Bengali as the medium of instruction in the schools of Orissa. In 1870, Kantilal Bhatacharya, a teacher of Balasore Zilla School, published a book, called "Odiya Swatantra Bhasa Nahe".[65] Against this move to abolish Oriya language, the cause of Oriya language was taken up by the leading weekly of Orissa, *Utkal Dipika*, edited by Gauri Shankar Ray and the Balasore *Sambad Bahika* of Fakir Mohan Senapati.

Movement for Modern Province

The first proposal for the unification of the scattered Oriya speaking tracts under single administration came from Raja Baikuntha Natha De of Balasore and Bichitrananda Patnaik of Cuttack in 1875[66]. They presented a memorandum to the Government in this regard. However -, the Lieutenant – Governor rejected the proposal outright in his reply to the memorial. In 1895 the Chief Commissioner of the Central Provinces decided to abolish the Oriya language from official use in the district of Sambalpur.Such a decision against the interest of the majority of Oriya population in the district but also throughout Orissa. On June 20, 1895,the *UtkalSabha* sent a memorial to Lord Elgin ,the Governor-General protesting aganst that unjust and arbitrary measure.They observed that the denial to the people of the use of their mother tongue was the worst from gagging and was yet unknown even in the most despotic form of government.But all protest were in vein, and by the end of 1895,Oriya was abolished in the courts of Sambalpur. However in July 1895 ,H G Cooke ,the Commissioner of Orissa, supported the movement for amalgamation of Oriya-speaking tracts. It was the first official support extended to the demands of people[67]

Early in 1903 a small group of enthusiastic Oriyas assembled in the town of Rambha with the help of Raja of Khallikote and decided to establish the *Ganjam Jatiya Samiti*. The first sitting was held in April 1903 at Berhampur which was attended by many representatives from Oriya-speaking tracts in different provinces and expressed their desire of the Oriya speaking people for amalgamation of their areas under a single administration. About the same time ,the *Utkala Sabha* of Cuttack called for a public meeting under the Presidentship of Madhusudan Das and decided to send a memorial to the Governor General demanding (1) "to transfer to the Orissa Division the Oriya speaking portions of the districts of Ganjam,Vizagpatnam,Sambalpur,Chhota Nagapur and Midinapore so far as this can be done having regard to territorial contiguity[68].

Finally, the representatives of Oriya speaking tracts of Madras, the Central Provinces and Bengal met in a conference at Cuttack on 30-31,December, 1903.It was the historic gathering of Utkala Samilani which met with great enthusiasm and continued the movement till the formation of a separate province in 1936.This conference was presided by Sriram Chandra Bhanja Deo-the Mahraja of Mayurbhanj. Rajendra Narayan Bhanj Deo, the Raja of Kanika was the Chairman of the reception committee and Madhusudan Das was the secretary and in fact, the man behind the organization.This conference was attended by a number of feudatory chiefs.

Agitation for creation of a separate State incorporating the outlaying Oriya speaking territories continued with vigour after 1905.The Utakal Samilani and held its annual sessions at different places and reiterated the demand in unequivocal terms. The matter was brought to the notice of the Royal Commission on Decentralization in 1907 and the creation of a chief Commissionership for the whole of Oriya speaking

territories was suggested .In 1908 Madhusudan Das tried to convince this matter to the British authorities especially the Secretary of State for India during his visit to London.

The situation took a dramatic turn with the moments decision of the Government of India during the Viceroyalty of Lord Hardinge regarding the redistribution of territories of the provinces in eastern India.The famous dispatch to the Secretary of State on 25th August 1911 suggested the annulment of the partition of Bengal and the creation of a new province of Bihar and Orissa..The sentiment of people were voiced in very strong terms at 8th Annual Session of Utkal Union Conference held at Berhampur On 6-7 April 1912.Madhusudan spoke in a tone of deep satisfaction : "I suppose there is no people under the British Government who have been treated more unjustly and unkindly than the people of Orissa who have done nothing to deserve such treatment."[69](Utkal Dipika 13 April 1912.).Some members of the British Parliament also were not satisfied with such a decision. The Secretary of State for India ,while appreciating the desire of Oriya-speaking people for a Chief Commissionership ,promised that equal attention would be paid to the needs of Orissa, as to Bihar. Thus, once again the legitimate interests of the people of Orissa remained unfulfilled. The new province of Bihar and Orissa came into existence on 1 April 1912 and Sir C.S. Bayley was its first Lieutenant-Governor. The Orissa Division comprised the districts of Angul, Balasore, Cuttack, Puri and Sambalpur[70]

People of Odisha were not satisfied with being tagged into Bihar in 1912.In the 12th annual sitting of Utkal union Conference held in December 1916 at Balasore, a committee consisting of seven members was formed to carray out continuous executive work regarding the union of the Oriya – speaking tracts throughout the year.The committee consisted

of 1. Madhusudan Das,2.Raja of Kanika,3.Harihara Panda,4.Brajasundar Das,5.Gopabandhu Das,6.Sudam Charan Naik and ,7.Raja of Seragada (Ganjam). The Committee met E S Montagu,the Secretary of State for India and Lord Chelmsford ,the Governor-General in Culcutta on 11th December 1917 and presented the document with arguments in favour of Union of all Oriya –speaking tracts under one administration[71].

The Utkal Union Conference held its 13th annual session at Cuttack on 30-31st March 1918 under the presidentship of Fakir Mohan Senapati and it constituted a standing council of 65 members from all parts of Orissa. In July 1918 The Report of Montagu – Chelmsford (Montford Report) was published. A special session of Utkal Union Conference was summoned at Cuttack on 21-22, September, 1918 to discuss the Montford Report and its proposals regarding Orissa. Madhusudand Das presided over the deliberations of the conference which adopted two resolutions.

The Utkal Samilani was the symbol of resurgent Odisha and was backbone of the Oriya movement in the tweenth century.The manifestation of the resurgence were visible, in varying degrees in all aspects of social and intellectual life. The most powerful of them was Satyabadi School(1909) founded by Gopabandhu Das[72]. The Oriya movement took a new turn with Non Co-operation 1921 and Civil Disobedience in 1930 .The Non –Coopeartion Movement got much encouragement due to Gandhijli's visit to the province in the last week of March 1921.He arrived at Cuttack on 23rd March 1921 and addressed meetings at Cuttack, Bhadrak, Satyabadi, Puri and Berhampur within six days. It was Gandhiji's first visit to Odisha.many young men of Odiha left their studies in school and colleges to join the movement.Among them were H K Mahatab,Nityanand Kanungo,Naba Krushna

Choudhury,Nanda Kishorer Das ,Jagabandhhu Singh,Pandit Gopabandhu Das,Pandit Nilakantha Das ,Pandit Lingaraj Mishra ,Surendra Nath das,Mahammad Hanif and few others left their job and profesion and devoted themselves to the Congress work.Even different societies and centers like Swaraj Ashram at Cuttack,Alakashram at Jagatsinghpur and Swaraj Mandir at Balasore were the centers of activities..The Non-cooperation movement spread in Odisha in 1921 and a new provincial working committee was formed with Gopabandhu Das as President[73].

The emergence of the Swaraj Party in 1923 opened new dimensions in Indian Politics. Swarajists won 12 seats in which only one member from Odisha own and during this time Gopabandhu Das was in Jail. However, in June 1924 Gopabandhu was released from the jail. The occasion was celebrated by holding a provincial congress conference at Cuttack on 28-29. In this conference Gopababdhu Das was honoured with *'Utkal Mani'* .Acarya P. C Ray welcomed Gopabandhu as the Utkal Mani in the conference and thereafter, he was known by this popular title.Mahtama Gandhi paid a short visit to Odisha on the request of Madhusudan Das on 19 August 1925[74].

In 1926 Swaraj Party was the largest in the Legislative Council of Bihar and Orissa..From Orissa there were five congress members , H K Mahtab, Nabakishore Das, Narayana Birabar Samanta, Lingaraj Mishra and Godavarish Mishra.Pandit Nilakantha Das and Bhubananda Ds were elected to the Central Legislative Assembly. The Swarajists offered constant resistance to the government throughout the period of third Reformed council.

A devastating flood occurred in the districts of Balasore and Cuttack in July 1927. Number of committees wer formed to look into the problem arose due to flood. Only a few months

later Gandhji visited Orissa in December 1927.Before his visit, he described the condition of Orissa in a most wretched tone, " It is to my mind" he said " an epitome of our distressful condition, Orissa regenerate is to me the regeneration for the whole of India. It is a land which need not to be the poorest in the country. Its people are in no way inferior to those of other parts of India. They have fine history all their own. They have magnificent temples. They have the Lord of the Universe in their midst, who knows no distinction between the creatures. And yet ,said to relate ,under the very shadow of the mighty temple people die of hunger in thousands. It is a land of chronic poverty ,chronic famine and chronic disease. Nowhwere have I seen in the eyes of people so much blankness, so much despair; so much lifeless as in Orissa[75].(D G Talukdar, Mahtma,Vol.II,p.241.).

During his tour of Orissa in December 1927, Gandhiji visited several *Khadi* production centers. He was astonished to find how the people lived in perpetual state of fear..The national awakening he felt had not succeeded in rousing their spirits .With grief he said, "Never since the days of Champaran in 1916, have I witnessed such death like quiet as I did on entering political Orissa through Banpur. And I fear that the quiet of Orissa is worse than that of Champaran".[76] Such was the state of affairs in the province when the Indian political scene took a dramatic turn with appointment of Indian Statutory Commission with Sir Johan Simon as Chairman in 1927 which paved way for the next mass movement. In February 1928 Simon Commission visited India. All over India there were firm reaction with the words 'go back Simon'.[77]

After that series of protests and preparations in the Civil Disobedience movement people tried to get Purna Swarajya.Pandit Gopabandhu's death in 1928 caused a

vaccum and after that Godavaris edited The Samaj and then Lingaraj Mishra.The Samaja played a crucial role for freedom struggle in Orissa.

The famous Dandi March began on 12 March 1930.In the meanwhile Utkal Provincial Congress Committee met at Balasore and on 16th March 1930, and decided to start the civil disobedience movement by breaking salt law.The congress leaders especially H K Mahatab and Surendra Nath Das prepared the ground at Inchudi near Balasore beginning the movement in the province. It was decided to start the movement in Orissa soon after the breaking of the salt law by Gandhiji at Dandi on 6th April 1930. On the same day the first batch of 21 voluteers ,led by Goapabandhu Choudhury and Acharya Harihara Das began their march to Inchudi from Swaraj Ashram at Cuttack and reached on 12th April..there was unprecedented enthusiasm in the Salt Satyagraha launched at Inchudi[78]. Soon large number of volunteers in several batches reached Balasore sea coast from Cuttack, Puri, Ganjam, Sambalpur, Baripada and other parts of Orissa. On 20th April hundreds of women led by Rama Devi and Malati Devi violated the salt law and collected salt at two centers in Inchudi. Even in Kujang Rani Bhagyabati Devi of Raj family took a prominent part in organizing the movement. Pandit Nilakntha guided the movement in the .Puri district.

The Salt Satyagraha was resumed in many places in coastal Orissa in January 1931.The political atmosphere in the country ,however,changed with the signing of the Gandhi-Irwin Pact on 5th March 1931.Even after signing of the pact ,the congress leaders and workers continued peaceful agitation by picketing foreign cloth and excise shops.Agin in 1932-33 the movement was started again. Lord Willington –the Governor General was not prepared to meet Gandhiji hence the movement was started at once.

In the meanwhile a delegation of Oriya gentleman met the Simon Commission in Patna and pleaded for the formation of a separate province. The Simon commission convinced an observed that "The province of Bihar and Orissa, which was constituted in 1912 is most artificial unit of all the Indian Provinces.It was formed by bringing under a single administration, three areas which differ markedly ,not only in physical features, but in many social, linguistic and cultural characteristics.[80] (Report of Ind.Statutory Comm. Vol.I,(Calcutta,1930,p.38.)

On behalf of the Oriya speaking people, Krishna Chandra Gajapati, the Maharaj of Paralakhemundi, went to London to attend the Round Table Conference and presented a Memorandum in farour of creating the separate state of Orissa. The Govt.of India announced in their Resolution No. F.12. VI-31 of 18th September 1931, the formation of a Boundary Commission under Samuel O Donnell to examine and report on administrative, financial and other consequences of setting up a separate administration and demarcate the boundaries, of the proposed Orissa province. The Commission visited places and record 410 witnesses at Jamsedpur, Chaibasa, Sambalpur, Raipur, Midnapur, Gopalpur, Waltair, Kakinada, and Cuttack. In determining the boundaries they examined several factors like, language, race, geographical position and the economic interests. The British authority appointed a Boundary Committee which recommended in its report in favour of formation of a separate Orissa province in the month of April 1932[81].

As Sir Samuel Hoare through a white paper published on 18th March 1933 had excluded the Oriya speaking tracts of Paralakhemundi, Jaypur and Jalantar from the proposed Orissa Province, a special session of Utkal Sammilani was called for in the month of May 1933 to discuss regarding the high-

handedness of Britishers and it was unanimously resolved in that session to stage peoples movement and protest meetings against the whimsical decision of British govt. On 11th February 1934 it was resolved in the Annual Conference of Utkal Sammilani held at Brahmapur that " if Jaypur and Paralakhemundi were not included with the proposed Orissa Province, the Oriyas would not accept that Orissa Province". Maharaja Krushna Chandra Gajapati again proceeded to London leading a group of Oriya representatives in which the Rajasaheb of Khallikote, Lingaraj Panigrahi, Bhubanananda Das and Shyam Sundar Das were included. Maharaja Krushna Chandra Gajapati gave a memorandum to the Secretary of State of the Joint Select Committee for merger of Paralakhemundi in the proposed Orissa Province. At last a report was published on behalf of the Joint Select Committee which was accepted by the British Parliament. On 1st April 1936 Orissa became a separate province due to the peoples demand, movements and agitations as well as for the untiring efforts of Utkal Gourab Madhusudan Das, Maharaja Krushna Chandra Gajapati, Pandit Nilakantha Das, Bhubanananda Das and many others for long three decades. The newly formed Orissa consisted of six districts namely Cuttack, Puri, Balasore, Sambalpur, Koraput and Ganjam having its capital at Cuttack. Sir John Austin Hubbak took oath of office and became the first Governor of Orissa Province[82].(Brja Paikaray

Soon after this, the Gadajat Revolt of the princes of the State was suppressed in 1938. Of the outlaying territories only the Ganjam district with Jeypore and a part of Paralakhemundi estate were amalgamated with new province. Odisha took full part in the 1942 movement when more than 3,000 persons were thrown behind bars and about 100 persons were killed. After the attainment of Independence, the Princely States merged with the major unit in 1948 and the new State of Orissa

(Odisha) was formed. An administrative reorganization of the State was made with 13 districts. Out of former Princely States, the districts of Mayurbhanj, Sundargarh, Keonjhar, Dhenkanal, Phulbani, Bolangir and Kalahandi were carved out. Presently, Odisha has 30 districts which was reorganized in the year 1992 with 59 sub-divisions,324 blocks,114 tehsils and 50972 villages,125 towns and cities of all categories where 31.65 million people live as per the 1991 census.

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3

MARITIME HERITAGE OF ODISHA: AN OVERVIEW

The Indian archipelago established its maritime supremacy in Indian Ocean trade from the time immemorial. It has spread its activities in the far off countries of Africa, South America and Europe in general and in the Far East and South -East Asia in particular. The story of settlements, the evolution of civilization and the synchronized religious and social activities had indelible imprints on these aspects from early times. The seafarers of India had the knowledge of the sea pertaining to wind, currents, tides, weather conditions and shipbuilding (traditional knowledge system) since the 3rd millennium BCE. The geographical setting of Indian Peninsula supported the development of sea-ports all along its coastline from the early times. On the great maritime facades, there are different regions along the east and west coast connecting to hinterland which favoured sea traffic. Majority of the rivers of India and their distributaries are suitable for navigation and many ports developed and existed along the estuarine

mouths. The origin of lagoons, lakes and other sheltered bodies along the east and west-coast supported the development of many ports, provided sheltered anchorages and moreover facilitated the plying of various types of boats. The people of Kalinga /Utkal (ancient Odisha), in fact, had played a leading role in the Indian overseas activities. By their adventurous oversea voyages, they not only contributed to the mainstream of ancient Indian culture and civilization but also in different parts of the world.

Although, there is no direct reference to the use of monsoon winds as an aid for sailing ships in early literature, the *Buddhist Jataka* stories and Jain Chronicles mention ships moving by force of wind *Pavanabalasamahaya*[1]. The Sangam texts, viz. *Purananuru, Ahananuru* and *Madurraikanchi* delineate different types of seagoing ships as they moved in the seas with the help of wind sails[2]. The author of the *Periplus of the Erythrean Sea* (60–100 CE) mentions the ports, anchorages, direction of wind, sailing conditions of east-coast of India[3]. Pliny mentions the south-west monsoon in his Natural History[4]. Fa-Hien (414 CE) describes about the winter monsoon in the Record of Buddhistic Kingdoms in connection with his return voyage along the east-coast of India to China[5].The voyage of Buddhist missions to South-East Asian countries and China gives us valuable evidence of the historical development of Buddhism in those regions. Further, it provides us with specific instances of the cultural relations of these countries between China on the one hand, and India on the other. The punch-marked coins of 6th to 5th century BCE, and the coins used during Satavahana (c.1st -2nd BCE to 2nd century CE), Salankayanas (300–440 CE), Pallava (6th to 9th century CE) depict ships with masts[6] indicate that the ships sailed with the help of winds in the open sea. Perhaps in the early days, monsoon winds were not known to mariners but

they could set sail during favourable winds and hence the voyages were necessarily seasonal. The seasonally reversing winds are almost consistent during the monsoon.

The Kalinga or ancient Odisha was the crux of the inland and foreign trade. It was and prosperous with riverine criss-cross from west to east and east and its free and flexible accesses to the *Kalinga-Sagar* which was re-designated later as Bay of Bengal[7]. The geographical position of Kalinga with several rivers, shelter ports provided an ideal environment for sea voyages. The sailors of the rivers like the Brahmani, Mahanadi, Suvernarekha, Rishikulya, Vansadhara etc., ventured into sea and developed the internal network of riverine trade routes.

Kalinga (ancient Odisha) was so prominent in the maritime trade that the great poet Kalidasa refers in the *Raghuvamsa* to the king of Kalinga as *Mohodadhipati*, the Lord of Sea[8]. The *Aryamajusrimulakalpa*, a Mahayana Buddhist text refers that all islands of Kalings Sea was dominated by ships of Kalinga[9]. Ptolemy in his Geographia of Ancient India mentions the names of various ports of Kalinga like Nanigania (Puri), Katikardama (Cuttack), Kannagara (Konark) and Kosamba (Pipili or Balasore)[10]. But Ptolemy did not refer to the other ports of Kalinga like Tamralipti, Manikpatana, Palur, Chelitalo, Kalingapatnam, which were also played a significant role in maritime history Odisha.

The ports of Kalinga had spread in different sea routes to different lands for the purpose of seaborne commerce. The mariners continued to have commercial, socio-cultural and political relations with South-East Asian countries like Sri Lanka, Java, Sumatra, Bali, Borneo, China, Burma, Cambodia, Champa, Malaya and Thailand. The role of Kalinga was very much reflected in the socio-cultural and economic fabric of South East Asia. R.D. Banerjee emphasized that the term,

'Kalinga' was used extensively in the Malayan peninsula which denoted that a man going there from any part of India termed as Kalinga[11]. Probably every Indian seemed to them as a Kalingaite, irrespective of the province from which he hailed. In the present day the scholars of South -East Asia are coming up with new theories and evidences which speak of maritime contacts of South East Asia with distant land including India.

The Chinese Annals of the former Han dynasty highlighted that the sea journey starting from the coasts of Tonkin (Tenan) and ending up on the Indian coast during the period of emperor Wu (40-80 BCE). Researchers opine that regular sailing from Gangetic Valley to Tonkin was taking place in the second and first centuries BCE[12]. The people of India from different provinces, some way or other, were connected with the main process of Indianization of South East Asia.

It is evident from the literary as well as archaeological sources that important routes existed for internal trade and commerce. The transport system of ancient India has been grouped under two divisions, land and water. Water route was more important and preferable than land route. Fallen tree trunks in the river were their guideline for water communication. Ancient literatures like the *Rig Veda* and *Atharva Veda*, Epics like *Mahabharat and Ramayana*, the *Indica* of Megasthenes and the *Arthasastra* of Kautilya etc. throw light on sea-routes and sea-borne communication of different types of boats. Boat motifs have been depicted on the walls of Jagannath temple, Puri, Sun temple, Konark and Lingaraj temple, Bhubaneswar. While going for a long distance trade in the Ocean, it was a practice to halt at different intermediate places for want of water and food. Sailors voyaging from Tamralipti, Palur and Kalingapatanam to foreign countries used Nicober Island as a place of halt. The *Arthasastra* is the only statecraft that provides a detailed account of the maritime

history of India in third century BCE and clearly mentions the rules and regulations of the ports, traders, trade systems, tax patterns and other aspects of sea trade[13].

Apart from direct Voyages, the merchants of Kalinga sailed along with sailors from Tamil Nadu and Kerala to South-East Asian countries. The mariners took their voyage to Malaya Peninsula through Malacca Strait to Sumatra, Java, Bali Borneo through the Sunda straits to Champa and Kamboja from east coast of India[14]. The sailors of Kalinga had landed at various places including Srikhetra in Burma, Takkola, Kokkonagara in Malaya Peninsula. Sri- Vijaya in Sumatra, Purva Kalinga in Java, Tonking in Combodia etc. The religious preachers travelled in merchant vessels to preach Buddhism in South-East Asian countries. The legends narrate that two thousand families migrated to Java along with the prince of Kalinga in the early medieval period[15]. The Jaha inscription of Java mentions the Kling (Kalinga) people and its contact with Java. The images of Buddha found in Java have close similarity with that some the Buddha images discovered at Lalitgiri and Ratnagiri in Odisha[16]. The excavated findings from Tamralipti (WB), Sisupalgarh, and Radhanagar of 3rd century B.CE to 10th -11th century CE, also throw light on this aspect. The recent archaeological findings from the sites like Manikapatna[17] which was an early historical port site continued up to 14th century, yielded coins of Sahasramalla (Sri Lanka) as well as Chinese celadon and porcelain .The excavations at Radhanagar[18], Sisupalgarh[19] have yielded Raoman clay Bullae and Rouletted wares which are the evidences of maritime trade with Roamn world in the early historical period. Another port-site of Chilika, Gourangapatna with its early historical antiquity has yielded Persian turquoise glazed ware of 9th-11th centuries CE.[20] Further, Khalkatapatna, a port site near Konarak was excavated, which has yielded

Excavated Antiquities, Radhanagar-Kankia



Terracotta Buddha Head



Terracotta elephant motif



Inscribed Stone pendant
"Sadabhu Tisa"



Inscribed TC sealing
"Devaya utara"

Chinese celadon, porcelain as well as Arabian pottery of 12th-13th centuries CE[21]. Explorations around Potagarh also brought to light two Chinese copper coins of late Song period. Exploration of the coast in lower Rusikulya river revealed sherds of Chinese celadon[22] Even the area around Narendrapur and Chandabali in Bhadrakh District has evidences of riverine trade net work[23]. The ancient sites like Narla Asuragrh, Budhigarah, Kharligarh on the river Tel tributary of Mahanadi in Kalahandi district has provided recently many evidences of early trade[24] These archaeological evidence points out to Odisha's participation in the trade boom in Indian Ocean from early period to 13th century CE.

It has been observed that the agrarian and industrial products of Kalinga like rice, incense, timber, ivory, textile,

conch shells, stone products, elephants etc. were mainly exported to South Eeast Asian countries. The cloth of Kalinga was considered as of high value and used by royal persons. The cotton of Kalinga was so famous that it was exported up to China[25]. It was observed that certain metals such as silver and copper were probably imported into Kalinga from the mines of Ceylon and spices like clove, spikenard etc. were imported from Java[26].

The mariners of Kalinga possessed sound knowledge of navigation. They were aware of sea current, wind direction and depth of different parts of the Bay of Bengal. The sailors used to sail to South East Asian countries for trade when the wind used to blow from northeast direction and favorable current pattern. During southwest monsoon the wind and the current used to flow towards north and the sailors used to return home from South East Asian Countries.The usefulness of wind and current pattern to the sailors has been scientifically proved. The use of sun, moon and stars were known to them for open sea navigation. Here, it is appropriate to quote R. Balkrishnan that remarkable similarities between place names of Java, Sumatra and Bali regions of Indonesia on the one hand and the place names of Odisha, particularly those of southern Odisha, on the other as revealed by his study. He says that the Ch[1]ilika region, the districts of Ganjam and Gajpati along with adjoining boarder areas of Andhra Pradesh (Srikakulam Dist particular) seem to have been focal points of Kalingan interaction with South East Asia[27]

Role of Buddhism

The Kalinga or ancient Odisha was the epicenter of the inland and foreign trade. It was a prosperous land with criss- cross riverine from west to east and east to west, and its free and flexible access to the Kalinga-Sagar which was re- designated later as Bay of Bengal. The geographical position of Kalinga



Rock-cut votive stupa, Langudi

with several rivers and shelter ports provided an ideal environment for sea voyage. The sailors of the rivers like Rupnarayan on lower Ganga, Bhudhabalanga, Subarnarekha, Baitarani, Brahmani, Birupa, Chitratpola, Mahanadi, Prachi, Rusikulya up to the river Vamsadhara etc. used these rivers for trade and communication where we could mark the imprints with tangible and intangible historical remains. Recently, the series of Buddhist sites discovered/documented by OIMSEAS on the coastal area of Bay of Bengal starting from Tamluk to Jaugarh, and Kalingapatna till Vamsadhara estuary, which were all parts of Kalinga country and presents a unique landscape that enriched maritime heritage of our State[28]. The Buddhist sites like Tamluk, Mughalmari, Jayarampur, Solampur, Radhanagar, Langudi, Lalitgiri, Brhmavana, Dhauli, Aragarh, Jaugarh and Salihundam etc. are all located on the coastal area in one row and developed some in 3rd century BCE and some in 4th -5th centuries CE and continued up to 12th - 13th centuries CE. It is an established fact that like Magadha, Kalinga was an important

geographical entity where cities like Tosahli, Kalinganagar, Samapa, Dantapura, Simhapura were in existence from the earliest period of Indian history[29]. These place names of ancient Odisha are echoed in the distant lands, of course, due to its interactions be it cultural or commercial. History has its record and archaeology has its footprints.

As we have discussed Buddhism played a vital role at the earliest phase of civilization to shape the state formation. So also Buddhism had always given importance to sea voyage. The growth of Buddhism was largely due to the contributions of trader community. The early Buddhist settlements like Taxila, Balkh, Saranath, Rajgir, Vikramsila, Sanchi, Champa, Amaravati, Nagarjunikonda, Tamralipti (Tamluk), Salihundam, Kalingapattna and Lalitgiri, Langudi, Radhanagar, Udayagiri, Ratnagiri have provided enough material evidences for continuity of maritime activities in ancient Odisha. The Mahayana text, *Aryamajusrimulakalpa* refers that all islands of Kalinga Sea were dominated by ships of Kalinga. Scholars[30] have accepted (Ray,1994:121-161) that in addition to trade, a potent motivating factor in this expansion of network from the Indian subcontinent was Buddhism. In the earliest strata of historical period (3rd century BCE) of Indian History, the Mauryan attitude to the sea and maritime trade is known from various sources. One has to take into account the fact that the Mauryan realm included within its long stretches of coastline where Asokan Edicts and remains are found at sites like Sopara in Konkan, Girnar in Kathiawad, and Tamralipti, Palur, Dantapura, Kalingaptnam, Tosali, Dhauli and Jaugada (Somapa) in Kalinga, which are situated on or near the coast. (Figure ...)

In the oldest Pali texts mostly written in Sri Lanka, we have accounts of the journeys which generally have followed already established routes. Later, we have accounts of routes


Buddha Image, Lalitagiri

actually followed by merchants, either on boats or with their caravans of bullock carts. The *Divyavadana*, dating to second century CE, states that dangers from sea-voyages arise from : 1. the whales and tortoises 2. from waves and tides 3.from running aground 4. from sinking in water, 5. from being struck on the marine rocks 6. from monsoons and 7. from pirates[31]. Indeed the *Jatakas* and *Majjhimanikaya*, which generally date from pre-Common Era abound in stories of shipwrecks during the sea voyages on account of one or other reasons stated above. The Sussundi Jataka, for instance refers to *makaras* (crocodiles) and huge leviathans swallowing up the whole ship. A graphic description regarding the attacks by huge whales in the Arabian Sea has been narrated by Diodorus (c.50 BCE) in connection with return journey of Alexander[32]. From the age of the Buddha (6th century BCE) onwards there was a second phase of urbanisation in India and a proliferation of arts and crafts, organized with guild system.

Evidence of such diversification was also available in the western Deccan and parts of Eastern India. The recovery of punch-marked coins from about the 5th century BCE onwards from different parts of the country was least monetized, which helped in the intensification of trade and commerce. For development of maritime trade two aspects were important i.e. the first is the technology of ships and the second is the role of Buddhism. These two are more prominent in Odishan context and have more evidences particularly known from recent excavations. In a sculptural depiction in Kanheri (Maharastra) caves of 2nd century CE, representation of a scene of a shipwreck is seen, two men praying for rescue to the Bodhisattva, who sends two messengers. This is one of the oldest representations of sea voyage in art when India's maritime trade had reached far and wide to Rome, Egypt, China and Sri Lanka. Again in Ajanta, we find three important scenes in paintings of shipwrecks in context with *Jataka* stories in cave no 2 and 17. Similarly, a boat motif dated to the pre-Common Era is reported from Tamluk.

In the ancient period (2nd -1st century BCE), several ports flourished on the coast, which served the outlets of India's trade with the Roman Empire, Sri Lanka and countries of South-East Asia and Far East. During the period under discussion India's trade through the Bay of Bengal was controlled by the ports on Kalinga and the Coromondal coast. The rise and fall of the ports were closely linked with the growth and decline of overseas trade.

Roman Connection

In the early centuries of the Common Era, Kalinga (Odisha) had active trade contacts with the western world, especially with the Roman Empire. The western trade flourished because of the demand for luxury articles of Kalinga in the Roman Empire. The *Periplus* of the *Erythraean Sea* (1st century CE) of

an unknown author besides mentioning the Kalingan port of Dosarene, has referred to the trade relation between Kalinga and the Roman world. The author mentions Dosarene as producing the best type of ivory known as Dosarenic[33]. (Mukharjee JOH,1982). Ptolemy, the Greek geographer during the second century CE has referred to another famous port of Kalinga named Palur from where ships disembarked directly across the Bay of Bengal to the South East Asian countries. The discovery of Rouletted ware from Manikapatna, Sisupalgarh, Radhanagar (Odisha), Kalingapatna (Now in AP) and Tamluk in the Midnapore (now in West Bengal) is very significant in this regard. The rouletted ware was first identified and dated by Wheeler at Arikamedu (Pondichery) is one of the parameters for trans-oceanic trade[34]. These were probably brought into Odisha by the Roman merchants. Rouletted ware is often regarded as important evidence of Indo-Roman trade. Influenced by the Hellenistic tradition of impressed decoration, rouletting is usually produced by the continuous rolling motion of a toothed-wheel, called roulette, when it is held against the revolving clay vessel. It is observed by Archaeologists that the finer varieties of rouletted ware were imported from Roman Empire, while the coarser varieties were made in India[35]. It may be mentioned that Roman bullaes have been discovered at Sisupalgarh and Radhanagar and Roman coins at Biratgarh and Bamanghati in the Mayurbhanj district, which suggests trade link of Kalinga with the Roman Empire. Besides, a gold coin bearing Graeco-Roman motif together with The tooth relic brought from Kalinga at the sacred temple Kendy, Sri Lanka. Pottery fragments and terracotta figures of the Roman origin have been also discovered from Tamluk (the site of ancient Odishan Tamralipti port). A terracotta Greek tablet containing the thanks-giving of an unknown Greek sailor to the East wind has been discovered at Tilda, situated between Tamluk and Bamanghati. It is indeed accepted that

there was a well developed indigenous maritime network in existence in Asian waters long before 15th century CE. It is indeed a priceless heritage that focuses ancient Odisha's strength on trade and commerce.

South East Asian Connection

Several sculptures are found from Ratnagiri (one now in Patna Museum) and Sheragarh in Balasore district where Jalarnavavaya is depicted belonging to 8th -9th to 11th -12th century A.D. These sculptures are Buddhist Tara and called *Astamahabhaya* Tara which is regarded as the savior from great eight perils. The *Astamahabhayas* or eight great perils are carved on the back slab four on either side. The endangered persons are depicted praying reverently to Tara for succor. In all these three sculptures *Jalarnava-bhaya* or peril from a boat sinking in Sea is depicted. This depiction understands the great veneration by the boatmen to the Buddhist Goddess Tara for rescue and regarded as saviour. This is again a representation of sea voyage which was very much active during 7th to 12th century CE in Odisha[36]. Similarly, the depiction of Martand Bhairava and double-masted Boats in the sculptural panel of Sun Temple, Konarak and Jagannath Temple, Puri are other evidences of sea voyage in 12th -13th century CE. H.B.Sarkar writes that "for the first fifteen hundred years of the Christian Era Kalinga played a very significant role in the history and culture of South East Asia"[37].

The earliest evidences are associated with Buddhism in the maritime regions of Southeast Asia which dates from 5th-6th century CE. in the mainland area especially Burma (Myanmar) and Thailand. Scholars have pointed out to the architectural influences of Nagarjunikonda and Amaravati on stupa designs in the Pyu (in present day Burma) and Mon (in present day Thailand) areas, as well as the discovery of Mauryan–style Buddhist inscriptions read as *"dharmacakra*



Boat motif, Lord Jagannath Temple, Puri

and *ye dharma..*" in these regions, to suggest that transmission of Buddhism to Southeast Asia took place by 2nd century CE.[38] Additionally , the Pyu site of Srikshetra (in the lower Irrawady River) and the Mon Dvarvati sites (in the Chao Phraya basin) have revealed the earliest Pali inscriptions which indicate the

presence of Theravada doctrines in the region earlier than previously believed

Buddhist settlements of Andhra Pradesh like Kalingapattinam, Salihundam, Thatlkonda, Bhavikonda, Amaravati, Nagarjuakonda, Dharanikotta, Jageyapetta on the river Krishna in Guntur region were developed during the period of Satvahanas and Iksvakus. These were prosperous Buddhist settlements mainly inhabited by monks and artisan classes. Buddhist monuments that developed here and both Nagarjunakonda and Amaravati are famous for their Art in 1st century BCE onwards. There were regular interaction between Odishan contemporary Buddhist settlements like Argarh, Radhanagr,Langudi, Lalitgiri and Udayagiri since, all these sites are located in same trade route and some inscriptional references are also found. A Brahmi inscription of the time of Sri Mathariputra Virapurusadatta, the second Ikshvaku king dated in 14th regnal year corresponding to c.286 CE records the building of a *Chaitya griha* within the Chuladharmagiri Vihara on the Sriparvata hill east of Ikshvaku city called Vijayapuri[39]. This was meant for the teachers of Ceylon who were engaged in the pursuit of spreading the *Dharma* to various countries. The Theravadinis from *Tamrapanidvipa* greatly influenced the Samghas at Sriparvata and converted to the faith those who belonged to Kasmira-Gandhara-China, Tosahli, Avanvasa,Yavana, Damilo, Palura and Tamrapanidivpa. These countries are also found mentioned in the Mahavamsa among the territories which had converted to Buddhism after the Third Council[40] .Thus, there was a close interaction between the Buddhist settlements of this period in Eastern India.

By 3rd century CE, Mediterranean trade had declined and many urban centres in the north and western Deccan underwent degeneration and decay. It may be appropriate to

correlate that the collapse of Han dynasty in China by c.221 CE contributed to changing the picture in Central Asia. By that time we observe a change in the Indian landscape, namely a rapid process of de-urbanisation[41]. It is evident from excavated Buddhist sites that even in the case of continuous human occupation, post-Kushana levels display much poorer building techniques and reuse of earlier building materials. A great number of small and large towns were abandoned in 3rd century CE and in certain areas as is shown by territorial surveys, the collapse of a whole network of roads and small settlements, which had been kept functioning by Buddhist monasteries.[42](Verardi-2007b,20,23ff).The process was probably aggravated by the collapse of the trading activity with the West that followed St.Cyprian's plague of the years 251-266 CE, which is an important component of the crisis of the 3rd century in Roman Empire[43] (MC Neill,1998:131,135-137)

This was also seen in the urban centers like Dantapura, Kalinganagar and Palura of Odishan coast which after 3rd – 4th century CE. little reference is available regarding the prosperity. Moreover, we have the Sisupalgarh (Toshali or Kalinganagar ?) – an urban centre of Odisha marked the decline and by fifth century CE, the entire settlement vanished, perhaps due to decline of maritime trade. The excavations at Radhanagar(Kankia) as discussed earlier show that there was an early historical settlement with fortifications and was existing from 4th- 3rd century BCE to early part of 5th century CE. The citadel is surrounded by number of Buddhist settlements like Langudi, Kayama, Vajragiri, Tarapur and Deuli which form cluster like that of Deccan.

The First phase (3rd century BCE to 4th century CE) is attested with the development of Buddhist settlements having Stupas, Viharas, Chaityas, Rock-cut caves together with coins, terracotta objects, early pottery, inscriptions all which indicate

that wide and huge settlements were developed along the East Coast.

The second phase (5th century CE to 11th century CE) as is marked with the construction of *Viharas such as Chandraditya Mahavihara Arya Vikshu Sanghsa, Madhavpur Mahavihara Arya Vikshu Sanghasa, Singhprasta Mahavihara, Ratnagiri Mahavihara* adorned with Buddha and Boddhisattva images, Vajrayana pantheons and votive stupas. Interestingly, Buddhism continued to be a principal religion till 7th-8th century CE. The Stupa Mandala, Manjusri Mandala, rare images like Mucchalinda Buddha (Ganiapalli, Lalitgiri, Kupari), Heruka (Jayarampur), Chunda (Udayagiri), Mahakala (Ratnagiri, Udayagiri), Astamhavaya Tara (Ratnagiri and Seragada), Marichi (Ayodhya), Buddha as part of *Dasavatara* (Jagannath Temple, Puri and Madhav Temple), are the indicators of growth and further assimilation with contemporary religious faiths like Siavism and Vaisnivism[44]. All these sites cannot be studied in isolation. The culture with plethora of Buddhist monuments and sculptures indicate a strong background of trade and commerce, and inter-regional as well as trans-oceanic cultural contacts. It is clearly reflected in the excavations that there was a down ward and shifting trend which marked after 3rd -4th century CE. Further, it is marked from the literature that there was a break in the principal core areas and new areas and settlements even at Ratnagiri, Udayagiri (2nd phase), Kuruma, Solampur, Kupari, Boudh, Brahmavana etc. developed after 4th -5th century CE and continued up to 11th-12th century CE. Several minor kings towards this time adhered to Buddhism. Nagesa, son of king Jaleruha, was converted to Buddhism and the Brahmana minister of one king Indrabala became a Tantric Buddhist. King Indrabala, in turn was converted into a Tantric Buddhist by Nagesa. One king Munja attained the position of *vidyadhara*

siddha together with one thousand followers[45].



Hieun Tsang

Yuan Chwang visited Odra, Kalinga and Kongoda in the middle of 7th century CE. From his travelogue, it is ascertained that Buddhism was in a flourishing state. There was a Buddhist learning centre called *Pu-sie-po-ki-li* (Puspagiri) Mahavihara which might be a University. Thus. in Odishan context it could be marked that there were two phases of Buddhism. The first phase mostly Hinayana (Theravada) form and later Mahyana phase settlements as discussed are also linked and depended on maritime trade. The Buddhist heritage sites along with Maritime heritage sites are closely associated like that of Palur, Manikapatna, Radhanagar, Lalitgiri, Langudi, Kuruma etc. The history and heritage of Odisha is largely glimpsed through these sites and their material culture.

Yuan Chwang passed through Odisha which was then divided into Wu-tu (Odra), Kung-yu-tu (Kangoda) and Ka-leng-ka (Kalinga). He describes the soil of Odisha as rich and fertile. He mentions about the existence of a good number of monasteries. He also mentions about a large sea port called *Che-li-ta-lo* which had a resting place for sea going traders[46]. I-tsing arrived at Tamralipti in 673 CE. by the sea route from China. From the Chinese writer Wang-Ta-Yuan of 14th century

CE., it is learnt that rice was the staple food of the Odiya people, which was sold at the unbelievable low price of 46 baskets in one cowrie during that period. He also mentions that because of the cheapness of living in Odisha nine out of ten persons going there for trade, did not like to return home[47].

The maritime activities of the Bhaumakara (736 -923 CE) period is recorded by the Arab and Persian geographers. The splendid foreign accounts narrate that it was a kingdom much larger in extent. Its ruler enjoyed a high status and maintained a large army. Brisk maritime trade was being carried on with the foreign countries. There were ports for the sea –borne trade and one such port was Nubin, situated in the frontier of Bhauma country (*Mamlakat*).The provisions and corn (ghalla) of Sarandib come from this town. Nubin (?), doubtfully read as such has not yet been identified. K C Panigrahi remarks that Sarndib is no doubt Suvarnadvipa or modern Sumatra[48].

Under the Somavamsis, Gangas and Gajapatis, Odisha's overseas trade reached its climax. Many sculptured friezes noticed in various temples give many clues about our maritime trade. The representations of boats in sculptural art of temples are quite significant. At Deokund in Mayurbhanj, Goddess Ambika is shown seated on a boat. A stone panel carved with a scene carrying elephant on a boat is in Brahmeswar temple at Bhubaneswar. Another slab containing an image of Mahisamardini lying under a banyan tree near the Brahmeswar temple, is having representation of a boat below the pedestal of the Devi. A panel in the *Bhogamandapa* of Sri Jagannath temple at Puri, depicts a boat. The *Jagamohana* of the Sun temple at Konarak has a carving on its parapet depicting the Martanda Bhairavas dancing on a boat. Another sculptural piece believed to be from Konark shows a boat being rowed by four persons. This sculptural piece is now preserved in the Indian Museum, Kolkata. But the interesting



Mahastupa, Ratnagiri



Astamahabhaya Tara, Ratnagiri



Buddha, Ratnagiri

sculptured panel of the Konark temple shows the king presented with a giraffe, an animal of Africa. So it clearly indicates that there was maritime trade between Odisha and Africa during the time of the Gangas. Boats and ships are also represented in the paintings of manuscripts which are housed in the Odisha State Museum, Bhubaneswar. Besides these findings, some having close similarity which are regarded as the outcome of maritime contact. The sculptural designs and hair styles of images of Burma are having close similarity with Odishan art. In Thailand, the 12th century CE. temple of Wat Mahadhatu of Swarnalok shows affinity with Bhubaneswar temples of Odisha. The four armed Bhairava image of Weing Sa is closely similar with the image of Sakta temples of Bhubaneswar and Prachi Valley. In Vietnam the window designs of Cham temple is very closely similar with the baluster window of Rajarani temple of Bhubaeswar. In Cambodia, foot-prints of Siva are also installed. In Odisha also Siva's foot-points are worshipped at Ranipur Jharial. In Indonesia, the motifs of the *Kirtimukha* and the *Makara* represent the Odishan style, depicted in Vaital and Mukteswara temples of Bhubaneswar. In Odisha, the Ramayan scenes are depicted in Simhanath temple at Badamba in Cuttack district, and Satrughneswar temple at Bhubaneswar[49].

Arabian Sources

The Arab writers have left behind volumes of accounts on Indo-Southeast Asian maritime trade. Some of them who visited these islands such as Abu Dulaf Misar (940 CE), Masudi (943 CE) and Ibn Batuta (1225-1254 CE) collected data directly as well as from the secondary sources in their reports the names of Quilon, Kalahabar ports lying in between east-west trade route. The heart rendering event of massacre of foreign traders in China in 878 CE and imposition of import and export taxes and ban on the export of gold and other

precious metals out of China imposed by the rulers greatly affected the international trade. The Arab geographers have frequently referred to the great port of Quilon which was utilized by the foreign merchants. The merchants from the Arab countries carried on their commercial transaction in small vessels to the port of Quilon. The Chinese merchants also transshipped their merchandize to this port for their dispatch to the Arab countries[50].

The famous account of Chu-fan-chi (1225 CE) is the first major work who have reported exhaustively on the trading transactions of South India with Sumatra. The author of the work was a commissioner of foreign trade at Chuan-Chao in Fukin province and utilized the opportunity together detailed information on foreign trade. It has also been reported that the goods of Malabar were bartered with those from Sri Vijaya. Regarding the process of the barter system, the author tells us about traders that they calculate first the value of their articles according to their equivalents in gold or silver and then engage tin barter of those articles at fixed rates. According to him, the relation of gold with silver was 1:12 . Quilon position as a brisk international port was maintained also in the last quarter of the 13th century as the Prime-Minister of Su-mu-ta-lo, i.e., Sumatra came to Quilon on business purposes. Marcopolo, who left China on way through Southeast Asia, reports all the international character of the trade of this port. Merchants were also busy in Burma, where one of their members is reported to have made gifts to the Vishnu temple of Pegan, which was built by the famous business corporation of Southern India going under the name of Nanadeshis"[51]. It is pertinent to note here that eastern coast of India during this period had mostly declined due to siltation on the mouths of the rivers, spotted earlier with bead harbours. As a result the big ships of medieval period could not enter into such ports.



Barabati fort, Cuttack

The ports of Tamralipti and Palur had already passed into oblivion. By the 15th century the devastative flood of 1300 CE. sealed the fate of Couvery port. On the fall of earlier great ports new ports came up and were capable of harboring the bigger ships of the medieval times.

Three years after Marcopolo, we come across the report of Ibn Batuta. He sailed from eastern coast of India to Java by covering 40 days on the board in the sea. He reported the sailing of aloes in Java and Sumatra. The traveler found elephants bearing the loads of Indian aloes for government and household uses[52]. The foreign merchants exchanged cotton cloth for the products from Java and Sumatra. .

In the context of trade relations of India with the South-East Asian islands the question of weights and measures and currency system were more or less connected with the then India. H.B. Sarkar has noted in detail of the weights and measures and currency system in the following lines. " The basic structure was provided by India, and it served as a

cushion for Indo South East Asian collaboration in the economic field. There is no doubt that the primitive method of sale and purchase was based on barter, but later on calculations entered into the process[53]. Prezylaski laid down long ago that the origin of the currency system in India goes back to a hoary past, in which the beginning was made by primitive methods of calculation based on four members of the body, such as two hands and two feet and twenty fingers. In this skim of things, the cowrie shells constituted the metrics. Thus, the multiples of 4.5 and 20 were at the route of this simple system. Cowry shells constituted units in the non-metallic currency system not only in Assam, Bengal and Odisha, but also in the Maldives, Yunnan, Siam, Shanstates, Java, Philipines etc. These shells were imported from east Africa, Maldives, Lakhsadives islands etc[54]. These cowries or Sipikinis are also mentioned in the Jatakas.

There is hardly any doubt that the idea of the currency, as outlined above, arose out of barter and primitive methods of calculations. Further, currency system developed out of barter and primitive methods of calculations. Subsequently, there developed the conception of standards of weight as applicable to metals as used for money, in other words Troy weight.[55]

Troy weights and currency system are based on one and two seeds known as *Raktika* and *manjiadi*. *Raktika* was mostly used in the north and *Manjadi* in the south. In the trading connections both were adjusted. The scales based on 320 *raktikas* passed on to Southeast Asia. The nomenclature of the table of the *raktikas* differs from island to island but the total number of 320 was accepted everywhere. Along with the barter system gold was used for sell of commodities in tin currency particularly in Malaya. It was during this period Chinese *prisis* and the Indian *tanka* were also in circulation in Siam and Pegu. For supply of goods of great quantity gold dust was

used in circulation. The oldest coins of Java in the shape of sealing wax had the legend of *nagarima* but the Javanese inscriptions record different Sanskrit names of the coins in circulation. They names referred to are *Karsapana*, *Masa*, etc. It is very unfortunate that such a fascinating subject has not yet been thoroughly focused.

The 15th century saw the rise of Malacca as the principal nerve centre of international trade. In this island the Gujarati merchants and the trading merchants from all parts of SouthEast Asia and the Far East used to jostle together for exchange of their goods. The merchants from western Asia and India constituted companies and guilds. This was then the greatest centre of cloth business. The cargos coming over to Mallaca contained Cambay Stuffs, scarlet cloths, saffron, corals, coloured cotton, vermillion, quick silver, opium and other items. The Javanese merchants exchanged their spices against cloths of all kinds for their home consumption. Of all the items Cambay cloths had great demand in Southeast Asian islands. In the early Portuguese records details of transactions of merchandise are found. The main trade of Bantum was the sell of male and female slaves of the native country as well as from Maldives Island[56].

Fransisco Serrao was the first European to visit the Mallaca island in 1512 CE, provides in in detail about the fascinating business activities of Mallaca including the number of Mallacan ships. Another very important item of export from India was the tails of oxen and cows which were used as *chamaras* and in exchange, the Indian merchants brought cloves, mace, nutmeg, camphor, tin, copper, sandalwood, seed pearls, porcelain and enormous quantities of apothecary's slegaloes, benzoin, huge quantity of white silk, white domask, coloured silk etc. The Kalinga merchants brought in large quantity the white sandal wood. The merchants from these

parts of the land are reported to have brought ten ship loads of white sandal wood, the edible camphor of Borneo was highly esteemed by the Indians. This item was as valuable as silver in weight[57].

Such a high market of international reputation was greatly disturbed by the Portuguese attack on Mallaca. The Indian ships, mostly of the Gujaratis were burnt in the sea. In the days of the turmoil the Gujarati and Kalinga merchants shifted their trading activities from Mallacca to Pase in Sumatra. After sometimes, Mallaca rose to eminence as the East-West international trade under the Portuguese dominance.

Portuguese Trade

The Portuguese after arrival in the Indian Ocean, started carrying on trade between India and South-East Asia. Portuguese expansion in the East in general and in India in particular was realized in three different levels: 1. On the one hand, there was an official expansion sponsored by Portuguese crown and limited principally to the coastal regions between Gujarat in the north and Quilon in the south. The official expansion was carried out by the officials, instruments of the state in areas lying on the west-coast of India. On the other hand, there was the expansion realized in the space lying to the east of the Cape Cameroon i.e., Coromondel, Bengal and the South-East Asian regions by the Portuguese private traders and renegades in the process of extending the individual, commercial and entrepreneurial activities to a free space reasonably away from the power centre of the westcoast of India. As the East Coast of India was relatively free from Portuguese state control and official interference, any enterprising Portuguese individual on reaching Goa or Cochin moved over to Coromondel, Bengal (East Coast) to South East Asia for establishing their private initiatives. The third level of Portuguese expansion was carried out through the medium

of ecclesiastical institutions and personnel, particularly through the missionaries and evangelizing devices of *Padroado*, which also acted as links connecting the privately expanded Portuguise settlements with official segments. Though for geographical reasons the Portuguese first landed in India, yet initially they concentrated on trade with south-east Asia and even carried on their trade beyond South-east Asia to Macao in South China. Between 1500 and 1509 CE, the Portuguese made bid to establish their mastery over the Indian Ocean[58]. By 1503 CE, they had established a fortified base in Cochin. The Portuguese were followed by the Dutch and the English in the Indian Ocean. The Dutch and the English came to South-East Asia before landing in the Indian coast. These European traders were exporting South-East Asian spices and Indian cotton textiles to Europe. But on account of paucity of funds, lack of demand for European products in the east and non-availability of bullion (due to mercantilist trends in Europe), the Portuguese, the Dutch and the English carried on trade between India and South-East Asia exchanging Indian cloths for South-east Asian spices to generate capital for their trade. In that process they started maritime trade with Odishan ports, carrying Odishan goods, mostly textile fabrics for South-East Asia[59]. The European traders generally used the mouths of rivers and sometimes the banks of rivers as ports without applying any engineering skill for the development of ports. These ports could be used for navigation only during favorable seasons.

In 1511 CE. the Portuguese captured Malacca and made it their base. Thereafter they established maritime relation with the eastern coast of India, China and Siam, and created a market for Odishan textiles in South East Asia as well as in the Far East[60]. The Portuguese arrived at Pipli, a port on the bank of the river Suvarnarekha in 1514 /1599 CE. However,

by the beginning of the seventeenth century Pipli was a port town of the Portuguese. From Malacca and Macao the Portuguese used to send to this port many vessels, laden with spices, cloth (woolen), lead, tin, quick silver and vermillion, and return these vessels carried cotton textiles, Bengal muslin, butter, rice and gingelly seed . In the process of Portuguese expansion, there appeared different enclaves in different parts of India with sizeable Portuguese presence having different level of authority exercise. While the west coast of India experienced the intensity and the heavy weight of power exercise, with core center being Goa, the east coast of India enjoyed liberal air needed for mercantile expansion. Later, the Portuguese authorities appropriated the mercantile achievements on the east coast of India through the *Padroado* devices and ecclesiastical institutions and integrated them to the Estado structure. Another important mechanism resorted to by the Portuguese crown was conferring of urban privileges and concessions on these settlements of east coastal India, which ultimately helped to keep their urban dwellers attached to the *Eastado da India* frames for carrying out larger agenda of the crown. The Portuguese renegades conducting trade and arms supply outside the Portuguese areas of control formed an important link in commodity movements of the *casados* in Asia. However, the meaning of Portuguese hegemony in maritime India was inscribed not merely by few scattered settlements on the west coast of India, but by assortment of activities being carried out on different levels by the various categories of Portuguese settlers in India, who had sizeable mercantile capital by way of private trade, and social and political capital by way of political and military linkages. This added to the most advanced technology of gun and artilleries, together with the huge vessels coming from Portugal, augmented the weight of their dominance on the Indian waters[61].

In the 16th and 17th centuries Odishan ports had wide commercial relation with different regions of Asia such as Persia, Maldives, Ceylon, Pegu, Macao, Tenassarim, Malacca, Achin (in Sumatra) and Batavia. Cloth and rice were the main exports from Odisha to Asiatic countries. In the first half of the 17th century the Portuguese and Dutch exported large quantities of cloth and rice to South-east Asia and Ceylon. Besides cloth and rice the other items of export were sugar, butter, oil-seeds and iron. The Odishan coast was called Gingelly coast because it supplied oil seed gingelly in abundance[62]. The Portuguese mostly carried on trade between Pipli and Malacca as also the Dutch carried on trade between Pipli , Balasore and Batavia, Ceylon

The Dutch

The Dutch began their trade with South-East Asia towards the end of the sixteenth century. In April 1595 CE the first Dutch expedition towards South-East Asia set out from Amsterdam. The port of Bantam in Java was their usual port of arrival. They first came to Pipli in 1627 CE. In 1636 CE the Dutch shifted their trade from Hooghly to Pipli where they established a stable and profitable factory[63]. They came to Balasore sometimes in the middle of seventeenth century. In 1676 CE. Balasore was one of the six factories of the Dutch in eastern India (the other five were Chinsura, Kassim Bazar, Patna, Dacca and Malda). The Dutch carried on trade between Odisha on one hand and Europe, South-East Asia and Ceylon on the other. From Odisha the Dutch exported cloth, rice and butter to Batavia and rice to Ceylon. In 1651 CE. the Dutch established a factory in the port Bimlipatnam for exporting rice to Masulipatam and Ceylon.[64]

The smooth transaction of trade by Europeans depended to a great extent on the good will of the subordinate Mughal officials. There are references to certain cases of interference

by the Mughal officials with the trade of European companies to certain cases of interference by the Mughal officials with the trade of European companies. While on land to Mughal authorities exercised control on European merchants, in the Indian Ocean the latter tried to exercise control on the indigenous merchants. In 1654 CE. at the demand of the local merchants, Malik Beg, the local Governor opened the godawn of the Dutch at Pipili which had been previously sealed by him on account of the Dutch refusal to grant passes to Indian ships to sail to places in Malay Peninsula and Achin (in Sumatra) which were then under the control of the Dutch[65]. The Portuguese trading activities in India were suppressed by the Mughal authorities, as they carried on nefarious activities like slave trade and piracy. In Indonesia the Portuguese could not withstand the onslaught of the Dutch. By 1641 CE. the Dutch had been successful in suppressing the Portuguese in Indonesia. In January 1641 CE. the Dutch captured Malacca from the Portuguese. Earlier the Dutch had effectively checked the English trading activities in Indonesia. In February 1623 CE. ten Englishmen, nine Javanese and one Portuguese were executed by the Dutch in Amboy on a charge of conspiracy. The Dutch expelled the English from spice islands and in other places allowed limited English trade under the Dutch supervision. Having failed to capture spice market in South-east Asia the English turned to trade between India and other parts of the world.[66]

The Dutch dug up a canal from the Burhabalang for the purpose of transport. This canal is partly existing today and is known as 'Olanda Nal' (the local people used to call the Dutch Olandaj). The Dutch settlement area in Balasore is even today known as Olandaj Sahi. Near Olandaj Sahi, within the compound of Barabati Girl's High School two Dutch tombs which are dated 23 November 1697 A.D. Balasore was a port

and a ship building industry. It remained as an important port of the English till 1690 CE. Though it lost its importance because of the opening of trade centre at Hooghly by the British, yet it was used by them till the middle of eighteenth century. There is evidence of Dutch trading activities at Balasore till 1772 CE[67] Besides Pipili and Balasore there were some other ports such as Harishpur at the mouth of the river Patua, which was also a ship building centre, Hariharpur on the bank of the Alaka, Manikapatana at the mouth of the Chilka lake and Hijli at the mouth of Rasulpur river[68]. Besides these ports, in Odishan coast there were many pleasant and good harbours which were visited by the European vessels.

British Period

The English arrived in India in 1608 CE. But as early as 1603 CE. they had started importing spices from South-East Asia. In 1633 CE, they established their factories at Hariharpur (present Jagatsingpur) and Balasore. They closed the factory at Hariharpur in 1642 CE., because of the silting of mouth of the river Alaka. But they continued trade at Balasore port for a long period. Balasore lost its importance as a result of the establishment of the trade centre by the English at Calcutta in 1690 CE. Even from this neglected port the English used to ship textile goods till the middle of the eighteenth century. During the hey-day of the Balasore port in the seventeenth century it was a flourishing centre of weaving industry[69].

Initially the Dutch and English had regarded trade with Southeast Asia as more important than trade with India. After the loss of Bantam in 1682 CE. the English had to concentrate on the Indian trade [70]. Of course, later on, after a long series of attempts, the English could gain Penang and Singapore. Like the Dutch in South East Asia, the English checked the Dutch trading activities in India. Finally, Indonesia became the Dutch colony and India became a British colony. By the

beginning of the eighteenth century the Indian merchants had withdrawn from shipping and trading in Indian Ocean because of the emergence of Dutch and English companies. The same factor also caused the withdrawal of Mughal officials and aristocracies from shipping.

The port of Balasore which was situated at the mouth of the river Budhabalang was mainly used by the English and Dutch and to a lesser extent by the Portuguese, Danes and French. While the European traders did not apply any engineering skill to develop harbours, they introduced their ship-building techniques. Two types of European ships-junk and ketch were introduced by them. They also introduced different types of boats such as Purgo (a Portugues boat), Pinnaces, Sloops and Jelia for carrying cargoes from and to ships which could not anchor at the sea shore for want of depth of the sea[71].

According to Thomas Bowrey (1905) during seventeenth century *Gingelly* Coast where the ports of Ganjam, Vizagapatnam and Bimilipatnam were recognized as important textile- exporting centers for the English. Bowery mentions that some of the richest hind merchants of India were resided. In northern *Gingelly Coast* the important mercantile communities were the *Kumuties*, but Brahmins were also engaged in shipping. All the ship-owning merchants of the place were Telugus by birth[72].

The first half of 18th century was also remarkable for the growth of coastal shipping between Ganjam and Madrass (Chennai).The trade relations between these two ports got intensified due to the latter's dependence for food grains on the former. All the ports along the *Gingelly* Coast were also continued to send ships to the region beyond the Godavari, a grain –deficit area, which experienced a continuous deficit from the close of 17th century. However, shipping from

Ganjam almost ended from the thirties of 18th century[73]. But again it was revived in the last part of 20th century with establishment of a port at Gopalpur.Gopalpur Port was active till 1942 and ceased only during 2nd world War.

The demand of rice continued till early 1878 and it gave immense impetus for trade in Odisha. In fact, there was a steady development of commercial activities in the ports for several years. By 1881-82, Chandbali was the principal port of the Province. It was considered more convenient by merchants and hence there was a diversion of imports from False Point to Chandbali. By the growing demand of Chandbali port, more steamers plied the place and the government also ran steamers from Cuttack to meet the Culcutta steamers at Chandbali. Two private firms joined in the competition and that resulted in the decrease of freight rates and increase in trade[74].

In the commercial relation of Odisha with Europe and Asiatic countries the European merchants like the Portuguese, the Dutch and the English had an upper hand and mostly used the indigenous merchants as compradors for the collection of manufactures from the Ordishan artisans, weavers and producers. The indigenous merchants also carried on direct trade with South-East Asia, sometimes in vessels, borrowed from European traders. Some Malayan ports and Achin remained open to Indian as well as European traders. The Indians mostly exported cloth to this region. In the 17th century there were some Gujarati merchants at Balasore, among whom Khemchand appears to have been most prominent. In 1680 A.D. Khemchand brought elephants from Tenassarim to Balasore[75] .

A C Pradhan asserts that the commercial relation between Odisha and South-East Asia did cease due to abandonment of ports which could not be used because of the silting of

mouths of rivers which was the geographical cause of cessation of commercial contact between Odisha and South East Asia. But there seems to be some important political and socio-economic factors behind this cessation. The indigenous compradors upon whom the European merchants depended for the supply of manufactures were ruined because of exploitation and control by the European merchants and exorbitant financial demands made on them by the Mughal officials. The Hindu merchants of *Gingelly* coast had to pay many extra dues to the Muslim officials of the place besides normal taxes. Out of fear for extortion rich Hindu merchants had to conceal their wealth and look poor. They found it impossible to satisfy the private financial demands of the Muslim officials and commercial interest of the European traders. The Muslim officials like Saf Shikan Khan (the Faujdar of Balasore) and Rashid Khan (the Nawab of Orissa) exacted heavy amounts from Khemchand, the chief indigenous merchant at Balasore. In 1672 A.D. Saf Shikan Khan demanded Rs. 30,000/- from Khemchand. Due to the latter's inability to pay this amount he was jailed at Cuttack. He returned to Balasore after giving a security for payment of Rs. 10,000/- in seventeen days[76]. The European merchants were subjected for control by the Mughal officials some of whom themselves carried on trade with South East Asia.

There was no great demand for Southeast Asian products, i.e., spices in Orissan market, Orissa could obtain spices from a shorter distance, i.e., Ceylon, Pulicat and Musalipatanam. Orissa also imported elephants from Ceylon. In Ceylon there was a market for Odishan products like rice, sugar and cotton textiles. In the seventeenth century the merchants from Odisha mostly carried on their Asiatic trade with Ceylon, Tenassarim and Maldives. Ceylon supplied spices and elephants, Tenassarim elephants and Maldives cowries. In the second

half of the eighteenth century the weaving industry of Odisha was adversely affected by the Maratha inroads, the establishment of British rule in Bengal, which offered greater commercial advantages and the Industrial Revolution of Great Britain which began in the field of textile industry doomed the indigenous cotton industry of Odisha. At the beginning of the nineteenth century, when British rule was established in Odisha, rice and salt constituted main exports from Balasore port which had commercial relation to Colombo (Ceylon) and Rangoon (Burma)[77].

Establishment of the Port

The question of establishment of a port at the coast of Indian territory between Calcutta and Vizagpatinam was mooted by the government of India ever since 1948. The ports (technical) committee recommended for the investigation to find out infrastructural facilities for the location of a port. The river mouth of Mahanadi at Paradip was considered as the most suitable place at the coast of Odisha for a deep sea port. The technical and economic feasibility reports from the experts went in favour of the establishment of the port at Paradip and a master plan was drawn up for the port at Paradip through the help of the Britisj Consulting Engineers, M/s. Rondal Palmer and Tritton. Ultimately, the final decision was taken in the said year for a sea port at Paradip under the dynamic leadership of the then Chief Minister of Orissa, Biju Patnaik, the legendary and visionary figure in the history of Odisha. Patnaik was keen to build the port at Paradeep. When the Central government refused to give funds to build the Paradeep port, he said: *To hell with the Government of India. I will build the port with state government and my own money.* And he spent Rs 1.60 billion on it. Later, of course, Nehru sanctioned funds for the project. Today that is Odisha's most prominent port.[78](S N Mishra,Biju Patnaik,Odisha Review)

On the occasion of the visit of the then Prime Minister of India, Pundit Jawaharlal Nehru, for laying in the foundation stone of the port at Paradip, a meeting was held on the premises of the Bana Bihari High School, Kujang on 2nd January 1962 under the Presidentship of Biju Patnaik, in which both Ratnamali Jema, M.L.A. and N.B.Samanta were present. The decision for the establishment of the port was declared in the midst of loud cheers of joy among the unprecedented crowd. Ratnamali Jema presented a decorated ship made of silver to the Prime Minister in the meeting. On the preceding day, that is, on 3rd January, the foundation stone for the port was laid by the Prime Minister at the selected site in the presence of large number of officials of the State and Central Government including the dignitaries and huge crowd and he declared it to the people of India with the following proclamation: "Willed by the people of India, I commend you, to this yet another National Adventure". Metaphorically speaking, this occasion seemed to have symbolized the linkage between the old local (regional) naval tradition and the great modern naval tradition of Indian civilization. To sum up, the study of ancient history of Paradip (Kujang) amply helps to comprehend the genesis of the present socio-cultural and political development of the place. Certainly, understanding the past of Paradip is an urgent desideratum in view of rapid urbanization and industrialization, in and around Paradip which is the repository of naval tradition[79]. Paradip Port is natural major port in the State of Odisha and is controlled by Ministry of shipping, Government of India. Two non-major ports as Gopalpur and Dhamra have also developed and initiated shipping activities.

Kalinga Bali Yatra

The long maritime heritage is being celebrated in the Odisha particularly in the month of Kartika.(November).The full moon

dawn of Kartika Purnima in the month of November marking the end of the four monsoon months of Chaturmas,is traditionally celebrated every year all over Odisha for thousands of year as the Boita Bandana or ceremonial sending forth of boats to distant shores. On every pond,lake ,river or sea lamp lit floats of banana bark or paper with ritual fanfare, sound,music and dance. Commemorating a journey many thousand years old of Kalinga Maritime History, now relieved in festive spirit from sub-conscious memory. The Kalinga Baliyatra 1992-93 (Nov-) brought back into focus ancient historical and cultural trade link between Kalinga (Odisha) and the islands of Bali and Java. A two thousand years relationship was celebrated by sending a sail boat INS V-Samudra from the modern Port of Paradeep in Odisha retracing the ancient trade route to Bali[80].

The Bali Yatra voyage was the celebration of a past intimacy of exchange that was being recalled in the performing art, classical art and crafts exhibition at the point of departure in Paradeep on November 9th and 10th 1992. The voyage was started from Paradeep on 10th November and sailed to Bali through the port towns Padang,Jakarta,Surabaya and finally reached Denpasar in 3rd February 1993.This event was celebrated under the sole guidance of the then Chief Minister, Late Biju Patnaik to memorize the splendid glory and grandeur of Odisha's rich historical linkages with South East Asia.

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4

MARITIME HERITAGE SITES OF ODISHA

The ancient state of Kalinga (Odisha) once extended from the river Ganges/Tamralipti to the Godavari River/ Rajmundry, including the parts of modern West Bengal, Odisha and Andhra Pradesh. During the early historic period Kalinga was famous for its glorious maritime trade and played a significant role in the spread of Buddhism. Fresh survey and study of these sites were undertaken by OIMSEAS during the last five years and the result is discussed for further research in Odishan context. In the last three decades exploration of ancient, medieval and late port sites in coastal Orissa were undertaken and as a result a number of port towns were brought to light. The only problem was to correlate and identify them with the descriptions in literature. The port sites explored so far are Kalingapatanam, Barua, Sonapur, Mantridih, Ganja, Kantiagarh, Palur, Prayagi, Manikpatna, Sanapatna, Badapatna, Arakhkuda, Banjiapatna, Boitkud, Astranga, Harishpur, Marichpur, Chandbali, Narendrapur, Dhamra, Chudamani, Balasore, Talchua, mouth of Survarnarekha (old

Pipili), Shah Bandar, Kansabansa, Panchubisa, Chandipur, Kasaphala, Kirtania, Talsari and Tamluk. Kalingapatnam, the mouth of river Vamsadhara was, once upon a time, the capital of Kalinga. Its maritime link has already been established and the Archaeological Survey of India has excavated a site near Kalingapatanam and unearthed the materials datable to 3rd century BCE. Barua Bandar on the mouth of Mahendra Tanaya river has been described by various authors and even in the *"Gangavamsanucharitam"* of 18th century. It was also a famous port directly linked with Puri. It is also clear that the ports of India, during the Early Historic period were connected with each other as revealed from the archaeological materials .

Tamralipti (22° 18' 0" N, 87° 55' 0" E) Ganga-Rupnarayana river Valley

Tamralipti is the name of an ancient city on the Bay of Bengal corresponding with Tamluk (Dist.Medinapur) in modern-day West Bengal. Tamralipti may have been one of the most important urban centres of trade and commerce of early historic Kalinga. This ancient port city was bounded by the Bay of Bengal in the south, river Rupnarayana in the east and Subarnarekha River in the west. It was one of the greatest sea ports of India which was connected both by land and water with different parts of India and many other countries since the c. 3rd BCE. It was the first important port in the East Coast of India and was linked by roads with ancient towns like Rajagriha, Sravasti, Varanasi and Toshali,Dantapura and Kalinganagara. This port is also mentioned in the *Mahabharat* and Indian and Ceylonese literatures as well as Chinese and Greeco-Roman accounts. In the *Arthasastra* there is also mention about this port. Dandi in his *"Dasakumaracharita"* has referred to the port of Tamralipti. *Kathasaritasagar* mention Tamralipti as a port. From 4th to 12th CE. Ptolemy, Fahien, Huen-Tsang, I-tsing and many others have mentioned about



Rupnarayana River, Tamluk

this port. The *Dathavamsa* also mentions that Hemalata and Dantakumara went to Ceylon with the tooth relic of Buddha from this port. The *"Periplus of the Erythraean Sea"* mentions that Tamralipti was a great commercial city near the mouth of the Ganges.Mahendra and Sanghamitra the son and daughter of Ashok started his journey from Tamralipti to Ceylon soon after Kalinga war. Ashok is said to have travelled upto Tamralipti to sea off the ship carrying a branch of Boddhi tree to Ceylon, and his journey by land to the mouth of th Ganges took only seven days. Fa-hein visited India in the 5th CE. and remained here for two years. Hiuen-Tsang also visited Tamralipti in 7th CE.Goods for Southeast Asia channelized through this port.

Brihadkathaslokasamgraha of Buddhaswami arrates the story of Sanudasa.He was the son of a merchant of Champa and came to Tamtalipti.A story in the jnata dharma,a jain literature, refers to seas merchants (nava-vaniyaga) of Champa who came to the port of Gambhira with merchandise loaded on bullock carts.At the port the merchandise were on loaded and then

reloaded in the ship.It is further mentioned that from this port ships sailed to Suvarnadvipa and Kaliyadvipa (Zanzibar ?).Motichandra identifies this port with Tamralipti[1]

Tamluk has been subjected to archaeological excavation at least twice and has been explored frequently. T. N. Ramachandran, and K. N. Dikshit carried out archaeological excavations in 1940. Among the antiquities recovered through excavation were terracotta objects, pottery and coins. Some of these antiquities belong to the third century BCE. ASI undertook the next excavation in 1954-55 under the supervision of M. N. Deshpande. As a result, a fourfold cultural sequence was established[2].(IAR,1954-55) However, no structures could be unearthed in the excavation; only rammed floor levels and ring wells were encountered.

ASI undertook further excavation of the site in 1973-74 under the supervision of S. K. Mukherjee. This excavation revealed four successive occupational periods, the first of which (Period I) yielded an assemblage of Neolithic celts, ill-fired pottery, a large number of microlithic tools, bone awls and a small number of copper objects. Period II, dated to third-second century BCE, yielded a few fragments of NBPW, a good number of beads of semi-precious stones, and a large number of punch marked and cast copper coins. One may link this period to the so-called Maurya-Sunga times. Evidence of a brick built tank and a few terracotta ring wells were also exposed. Period III, belonging to the Sunga-Kusana phase seems to have been the richest one and have yielded ceramics, and a very large collection of terracotta figurines. Period IV stratigraphically represents the so-called Gupta period[3].

The site as such now covers by the modern settlement.A recent survey reveals that the site extends over a vast area with considerable habitation deposit.The collection of antiquities stored and displayed in Tamluk Museum provides



Yakshi, Tamluk Museum



Amphorae, Tamluk Museum

evidence of the cultural sequence of the site which ranges auryan to late Gupta period.The evidence of Boats,Amphorae,Rouletted ware as also image of Yakshi are the noteworthy features of the site which speaks about glourious maritime past

Pipli

Pipli was situated at a distance of 30 miles north of Balesore on the river Subarna rekha. This famous submerged port was situated in the mouth of river Savarnarekha. It was the earliest European settlement on the Bay of Bengal and soon flourished as an important harbour on the Orissan Coast. All the trade at Pipli was carried on by the river Suvarnarekha.Pipli welcomed the Portuguese sailors by the middle of 16th century from then onwards it became an important seat of the Portuguese after their expel from Hugli and from Hijili in 1631 and 1636 respectively.Bruton described Pipli in 1663 as a port town of the Portuguese where they chiefly resided[4]

It was also a great slave market where the Arakans and the Portuguese and others used to bring their prisoners. Between 1621 and 1640 the Portuguese pirates brought as many as 42,000 slaves of whom 28,000 were baptized and were sent to stations like Pipli, Baleswar etc. Dutch, Danes and Portuguese continued to hold their grips over the port of Pipli for a long period. Early in the 16th century the Portuguese Missionaries followed the traders and settled at Pipli. The Augistnians had built a church and residence at Pipli Port. But consequently the Portuguese traders tried to exploit the natives and create conflict with local rulers. They made themselves as pirates, not as traders. They created direct hostility with the Moghul rulers who tried to destroy their settlements and churches in the coast. William Leyel who had been for some time at Pipli was entrusted to conduct the see-fight. He plundered a Moghul ship to recover their loss sustained at Pipli. In 1644 another Moghul ship was captured by them. In 1647 seven Moghul ships fell successively in the hands of the Dutch. Gradually, Danish could plunder 30 ships during their 32 years of hostility with the local rulers. But they were not given any chance to avail the facility of trade and commerce[5]. With the silting up of the mouth of the river Suvarnarekha, the port of Pipli was deserted leaving some remnants of its famous maritime activities. There remained a ruined light house in the village Balarampur near Jaleswar, which was a prominent trade center. At a short distance of two forlongs there was a grave yard of Portuguese settlers. On both sides of the mouth of Suvarnarekha, there were two forts. One is Kiratrajagarh in the eastern side and another is Shabandargarh in the western side. The present Khaidpiple, Jhadpippal and Pipli are synonymous to Pipli port. The famous Shiva Lingam of Lord Bhusandeswar in the mouth of river Suvarnarekha was perhaps brought here in a ship in those days. In the entire

coast of Orissa, Baleswar, situated in the mouth of Budhabalanga emerged as a prominent international port in eastern India during 17th century CE. It was the best and most prosperous port for the reception of ships from distant lands.

Olandazsahi (Burhabalanga river Valley)

Olandaz Sahi is situated at the north-eastern periphery of Balasore town 2 kms away from the present Burhabalanga River. The Dutch people had their settlement here from 16th Century CE. They are called 'Olandaz' in local parlance and so their habitational site has been named as Olandaz Sahi. In the Barabati Girls High School premises, we find their mausoleums. Two of them quite intact, stand in triangular projection up to a height of 30 to 40 feet. In one of them "Michiell Jans Burgrff Vanseven Hviseno Bitt" is inscribed with a date reading as 23 November 1696. In the other one 'Enabella' is inscribed. Their settlement and factory site seemed to have existed towards its east. Next to the Portuguese, the Dutch were the foremost traders in Balasore and their factory here was 6th in Bengal. They continued their activities till the middle of the 19th Century[n].



Archaeological Mound, Oandazsahi, Balasore

As has been pointed out earlier the bed of Burhabalanga River has been silted and receded in the right side. The low lying marshy land extending 2/3 km became unsuitable for habitation and navigable purpose. Therefore the Dutch people dug up a Nala connecting their establishment with the river to transport goods through smaller vessels from and to anchor ship at the river. During the year 1990 – 1991 Olandazsahi was excavated by the Institute on the bank of a deep Nullah passing into the river Burhabalang[7].

A few wooden planks have been exposed at the right side of the Olandaz Nala on the right of the ancient bank of the river 200 m. to the north of mausoleum site. It is an interesting site with a 5m. high mound spreading over 1500 sq.mtr. area. From east to west it measures 50m and north to south 30m, with a moat like depression around it resembling a dockyard. A vertical trench was laid across the mound in north-westerly direction. Excavation was carried out by the institute from the western sector over 7 X 6m. area. At a depth of 1.5m below the surface a huge boat was traced out together with other cultural relics. In course of the excavation it was observed that the vessel is buried in north-south position and so the trench was extended in southern direction and the front position of the boat was exposed.

The vessel is 15m. long and 5m. wide. Back side of the boat is still found burried in the Olandaz Nala and the western side was yet to be exposed fully. Initial investigation indicates that the vessel appeared to have been built with woods of cold climate. The wooden pieces are found as strong as iron while the iron nails have rusted much. Due to heavy rain further excavation could not be carried on.

From the excavation, other important antiquities and relics have also been found. Rouletted ware and basket impression pottery ascribable to pre-christian centuries and early centuries

in association with red ware, black and red ware and black ware have also been found. Chinese celadon ware ascribed to 7th Century CE. to 14th Century CE has been found as well. However detail cultural sequence and a firm anterior datum line of the site could not be established. The find of Muslim silver coins with the mention of the mint city 'Murshidabad' found in the stratified deposit along with one coin, each of the Dutch and Danes above the vessel level point to a 16th-17th Century date. In another Muslim silver coin the mint city has been mentioned as Farukabad.

Broken pieces of storage jars, vases, utensils of various shapes and sizes have also been excavated in association with semi-precious stone beads and bangles. Big storage jars of plain and basket impression designs have been explored in the old families of Balasore engaged in shipping and seafaring activities in 19th/20th century. On discussion it is known that the big jars have all been imported from outside. So it is plausible to think that many pottery specimens recovered in excavation seem to have been imported from foreign countries[8].

As stratified cultural sequence, to study the life history of the port-city of Balasore, the ancient Bolanga or "Bolangka metropolis" the trading terminus, is a desideratum, it is hoped a fuller excavation may bring forth many unknown facets of glorious Odishan Maritime traditions within and outside the country.

Dinamardinga

The area next to Olandaz Sahi is called Dinamar Dinga. This area was famed for Danish commercial establishment. On this site is found an old channel of Budhabalanga river. Small mounds yielding pot sherds and brick bats are noticed here. Near one of the mounds , a boat is found buried. Still some portion of the boat is visible inside the channel. Besides, some water logged wood with iron nails on the top is noticed. This

leads to suggest that boats were coming through the channel up to the present Dinamar Dinga area now situated at a distance of about one kilometer from the river bank[9].

Dhamra

Dhamra is situated on the north of the river mouth Dhamra, a tributary of river Brahmani. Dhamra is one of the ancient ports of India. Dhamara is a small community on the banks of the Dhamra river in the Bhadrak district of Odisha. It developed as a port around the 15th century AD. The port was used for the coastal trade between northern Odisha and Kolkata to the northeast, and continued to be used to a small extent after independence in 1947. The port limits of Dhamra were officially notified as far back as 1931. Among the many ports that dotted the coastline of Kalinga were Dhamra and Chandbali Ports which were established near the mouth of river Dhamra. In the Imperial Gazette-1928 AD, Walter Hamilton observed that Dhamra and Chandbali (together known as Kanika Ports) had been a prosperous oceanic trading centre in the medieval period and Point Pamiras of southern side of Dhamra river mouth was one of the most important navigation landmarks of that time. A multitude of commercial vessels were plying on the Indian ocean doing prolific trading through this port[10]. Till about independence and even thereafter it was used for cargo transportation between North Orissa and Kolkata.

During April, 1998, an agreement was signed to develop the Port of Dhamra, about seven kilometers away on the coast of the Bay of Bengal, as a deep water port. The temple of the Goddess Maa Dhamrai is located in the town. Some say that the goddess was brought from Sri Lanka by a local merchant who frequently traded with that island. Others say that she came from a place named *Satabhaya*. She was thrown into the sea by her sisters who were angered by her pure vegetarianism,

and was found floating by some fishermen who brought her to Dhamra. Old temple had been destroyed, the present temple was built over a ten-year period, opening around 1990.

Chandbali

Chandabali is 50 km away from Bhadrak, on the bank of the River Baitarani, and a tourist destination for visitors to the Bhitarkanika Wildlife Sanctuary, Akhandalmani & Patana Mangala of Chatrapada near Narendrapur. Before the 19th century AD, Chandabali was a small fishing village, and a natural river port.

By 1874, the importance of Balesore had declined considerably and its place had taken by the newly formed inland port of Chandabali (Bhadrkh Dist.) which was connected with the Bay of Bengal by river Dhamrah. Light steamers ran through almost daily to and from Calcutta (Kolkota) and as the Commissioner observed 'the place was likely to become a vital importance to the province as a center of coastal trade activity'. It was second only to False Point, which continued to be the chief port of all for large steamers and sea going vessels. In 1873-74 ,the value of exports and imports were Rs.30,07,175 /- and Rs.28,91,288/-, respectively and net receipts from the customs duty and port dues etc. were Rs.36,114/- only. During 1876-77 large exports of rice and paddy took place from the ports of Odisha due to a severe famine in south India. The value of exports increased to Rs 66, 71, 259/- and there was also corresponding increase in the customs revenue and port dues[11].

In 1866 trading began from this port to Bengal and in 1881 it was declared a government port by the British government.The riverine trade could best be known from Chandabali which connect Odishan hinterland and Hoogly estuary. By 1881-82,Chandabali was the principal port of the



Chandabali dock



Anchor, Chandbali

province.It was considered more convienent by merchants and hence there was a diversion of imports from False Point to Chandabali.By the growing demand of Chandabali port ,more steamers visited the place and the government also ran steamers from Cuttack to meet the Culcutta steamers at

Chandabali. Two private firms joined in the competition and that resulted in the decrease of freight rates and increase trade.

Towards close of 1880-81 the government sanctioned a new project in order to complete the line of inland water communication between Calcutta and Cuttack. Inland water link between Cuttack and Chandbali was very popular by that time and naturally the British authorities desired to complete the link between Chandbali and Culcutta (Kolkota) through range of canals. The Orissa Coast Canal Project was considered to be much cheaper and it cost only 40 Lakhs of rupees to the Government for completion. The length of canal needed to be constructed for joining Culcutta with Chandbali was only 92 miles and it was divided into four ranges between the Rasalpur in the district of Midnapur to Matai in Balesore [1]district. The project was completed soon after 1887. The total value of seaborne trade declined immediately after the opening of the Coast Canal partly due to diversion of commercial activities through the new route[12].

The forest products such as bamboo,wood and general products like rice were the main products that are transported to the Kolkota market in the 19th -20th century.The big anchor still found at Chadabali is one of the major evidence to supplement the fact.There were ware houses,market palce and jettes spread over the banks of the river.Most of trade transcations were carried out through this common port which still in use. This led to the growth and development of a market for agricultural produce. Maa Patana Mangala Temple of Chhatrapada is about 25 km away from Chandabali. The Patana Mangala is a maritime goddess, close to the village Narendrapur. The village Narendrapur itself a ancient archaeological mound. A small rivulet is flowing near Narendrapur, which connect the village with river Baitarani. The maritime remains like anchors, warehouse, coustom

houses are found in the town of Chandabali. This port was mainly connected with Kolkata.

Narendrapur

Narendrapur is situated in the Tihidi Tahasil of Bhadrak district on the way to Chandbali Bhadrak road, about 131 km from state capital Bhubaneswar. The village is famous for archaeological remains like numerous Sivalingas, 8ft. Barahi image, Patana Mangala & the ancient archaeological mound. The village is surrounded by a narrow perennial water channel, which is linked with the Salandi River and merged with Baitarani River before merging with the Bay of Bengal near Chandbali. Several well carved Phalus (Sivalingas) were found in the nock and corner of the village. A tradition present in the locality reveals that beautiful Sivalings were exported to South-East Asian countries from here. To substantiate this tradition even now we find large hoards of Sivalings in various shapes and sizes, lying scattered in and around the



Siva linga, Narendrapur

village and the water channel may used for transportation to the nearby sea port. During the year 2000 OIMSEAS has surveyed the village and locality and could have collected some pottery specimens belong to early part of the Christian era. During the recent survey in the year 2014 by the Institute, it is confirmed that the village is situated over an ancient archaeological mound. The other important antiquarian remains of the village is a huge image of Barahi, as large as the one preserved in the ASI Sculpture shed at Jajpur, is the presiding deity of the village. The colossal sculpture of Varahi is partially broken measuring about 8 ft. in height. A large fish after detachment from the image is now kept near the pedestal Goddess Patamangala of the nearby hamlet village attracts large number of devotees from the surrounding area. As per the tradition Goddess Patamangala is associated with maritime trade. All the above archaeological facts and remains clearly indicate that Narendrapur may be a maritime trade center during the early part of Christian era. The village is well connected with the sea particularly with Chandbali and Dhamra through the water channel passing through Salandi-Baitarani River

False Point and Hukitola

There were certain places near the sea coast of Paradip were considered to be favorable for the establishment of the port and harbor by the British Government. The False Point harbor located at a distance of 10 km. from the present Paradip Port was established at the Mahanadi mouth by the Port Commissioner a Calcutta in 1838. In fact, the construction commenced on 6th December 1836 and was completed on 16th October 1837, the light exhibited on 1st March 1838. The False Point (*Batighar*) derives its name from the circumstances that ships proceeding northward frequently mistook it for the point Palmyras, a degree further North. It lies North Latitude 20^{0}

A view of Hukitola Building



20[1] and East Latitude 86^0 77[1]; and was reported by the famine commissioners in 1867 to be the best harbour on the coast of India from the Hoogly to Bombay. The term "False Point" literally means the centre of wrong signaling. This is named as such due to the fact that the point Palmyras was located at the mouth of Brahmani river at about 40 miles away towards the north. It was very widely known as the point of direction for the ships sailing through the Bay of Bengal. But this point (False Point) is situated at the north of Mahanadi, and sometimes it created erroneous conception and illusion among the sailors of the ships as if the point Palmyras. As a result, The ships were dashed against the sand flat and damaged. Thus, ultimately it was converted into False Point after being repeatedly called as the point of Palmyras.

False Point was recognized as an important port of Odisha in 1860-61.During the years of the femine Cuttack became a very important center for rice trade.It was linked by canal with False Point.Over this canal were sent out the chief articles of export and brought in important iteams like cotton,kerosene,oil, metals etc.Agricultural products were brought from neighbouring villages for export through False point and through Chandbali[13].

Hukitola was a port-cum-custom establishment by the British. It stands on an island at the confluence of the river Mahanadi mouth and the sea at a distance of 8 km. from the False Point. The place was located for its establishment by the then Collector, Cuttack, John Beams in 1875. Thus the government took steps for the establishment of another port or harbor at the river mouth of the Mahanadi in view of urgency to meet the requirement of the people. The Hukitola was an important naval centre for trade and commerce till the 1st quarter of the 20th century.

Brahmavana (Chitrotpala Valley)

Brahmavana one of the major Buddhist site of Odisha is situated on the left bank of river Chitrotpala, 20 km south of famous centrally protected Buddhist site Lalitgiri in the Cuttack district. The site partially excavated by the Odisha State Archaeology during the 1976-77 and 77-78 excavation seasons. In the nearby villages, Nagaspur, Kendupatana, Kalanapur Buddhist antiquities are found abundantly. Probably, these antiquities were taken from Brahmavana. During the last excavation by the Odisha State Archaeology those Buddhist sculptures are unearthed and kept in the Brahmavana sculpture shed. A monastic complex of the site was also partially exposed[14].

During the year 2010-11, the Odishan Institute of Maritime and South-East Asian Studies has noticed some exposed archaeological remains on the river cliff very close to the site. The remains of early potteries found from the site indicate that the site is much older than the present excavated Buddhist remains. Earlier scholars also referred about the archaeological potentiality of Chitrotpala valley. The topography and the reference suggest that there might be an ancient inland port/ trade centre in the Chitrotpala valley. During the last year exploration by the Institute, few early historical archaeological



River cliff showing the cultural deposit, Brahmavana

objects mainly pot shreds are noticed. Brick bats, architectural pieces are also noticed on the surface.

The earlier excavation and recently noticed archaeological material confirm the archaeological potentiality of the site. Though the site earlier was established as a Buddhist site but the recent discovery indicates it could be a multicultural site with Buddhism as a dominant one with early historical cultures of the Chitrotpala valley.

Port of Puri

The port of Puri was in functioning condition till early part of 20th century.The port did not allow vessels during the North-West monsoon.This port was an open road stead and owing the surf,the operation of loading and unloading became difficult.Because of lack of storage facilities , it could not compete with other port of Odisha in allowing vessels to and from it[15]. However, the port continued to function till the dawn of the 20th century and the remanants are still presnt in Puri Beach particularly at Digabarini and Bankimuhana.

Bidyadharpur, Naraj, Cuttack

A tiny village Bidyadhar Pur lies on the right bank of river Kathajodi, just opposite to the present extension area of Cuttack city the Markata Nagar or C.D.A. In the year 2002 some archaeological remains were come to the notice of the institute. During the exploration on the Kathajodi River bank antiquities were found which can be dated back to the early part of Christian era. Among the notable discoveries are red slipped ware, red ware, gray ware, knobbed ware, terracotta toys, terracotta and stone beads, terracotta wheel etc.. The discovery of knobbed ware and Rouletted ware suggests that Bidyadharpur during 2nd century A.D. might be a trade centre which might have trade links with the Roman civilization. In the Asiatic Society's Monograph of London 'Ptolemy's Geography' describes some notable places of the eastern coast of India The reference of Manada river mouth and Katikardam are noteworthy in Ptolemy's Geography which tentatively



River cliff showing the cultural deposit, Bidyadharpur

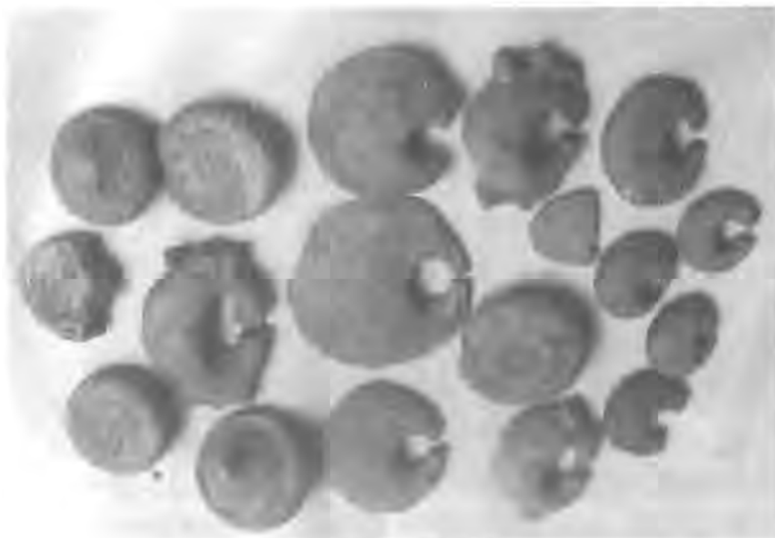


Rock Art depicting maritime heritage, Naraj

identified with Mahanadi river mouth and Cuttack city respectively. Apart from these antiquities a pre-historic rock art describing the maritime activities also discovered from Naraj. It suggests that Naraj which is situated on the confluence of River Mahanadi, Kathajodi and Prachi might be a busy commercial trade centre during the early Christian era. The villagers of Bidyadhar Pur too reportedly find archaeological remains while digging wells. On the ancientness of the Cuttack city certainly the recent discovery may not be as conclusive as is needed, but Cuttack was certainly had a past. The change in the river course of Kathajodi might eventually have washed away some portions of the site during the mediaeval period[16].

Korkara, Baranga, Cuttack

The archaeological site of Korkora is situated on the right bank of the river Kathajodi locally known as Devi about 40 km to the northeast of Bhubaneswar. The site can be approached by turning to the east at Pratap Nagari from N.H. 5 and following the road on the canal. The site was brought to light when the river Devi cut into the site exposing the archaeological deposit-on-the river cliff of the right bank river near Korkora village, Dist. Cuttack. The site is important in understanding the



Terracotta object, korkara

nature of flood in the Deltaic region from the early historic period. Important findings include red ware, black ware, Knobbed ware, Roman bullae, burnt bricks, both terracotta and stone beads, terracotta ear ornaments, terracotta ring wells, animal bones, 'T' shaped bricks etc.

The archaeological importance of this site accrues from its location in between two early historic centers of coastal Odisha, such as Sisupalgarh near Bhubaneswar and recently discovered Bidyadharpur near Cuttack. Sisupalgarh and Korkara were well connected with Bidyadharpur through river Kathajodi and its tributaries. The terracotta ear ornaments are like those belonging to the excavated remains of the late period as found at Sisupalgarh. Korkora was a rural site when urbanism flourished at Sisupalgarh and Bidyadharpur, Kankia (Radhanagar) during early historic period. Even then, there is an over emphasis on urban centres of the early historic period without any stress on rural sites, very few of which have been reported in Odisha. However, understanding of the processes of early historic urbanization would be incomplete

and inadequate unless one appreciates the nature of rural life as well as rural-urban interaction. From this point of view, Korkora being an early historic rural site located in between two early historic urban centres of Sisupalgarh and Kankia. However, a recent visit has shown that gradually the river Devi/Sidhua is cutting into the early historic rural settlement destroying the brick alignment which could be traced on the section of river bank[17].

Cuttack

The fortified city of Cuttack has been capital of Odisha for over eight centuries continuously.Its etymological meaning denotes a fort and capital city.Cuttack occupies a strategic position at the bifurcation of river Mahandi and its brach Kathajodi.Beginning as a small rural area,its recorded history begins from the year c.989 CE.Sri Jagannath temple chronicle ,the *Madalapanji* refers to the establishment of the city by a king named Nrupa Kesari.The Odishan tradition like *Katakraja Vamsavali* refers to the establishment of the city and building of the fort *dvadas vatika* (Barabati) by Nrupa Kesari in the Saka Era 915[18]. .However,Cuttack city gained its importance . In the remote past Cuttack was connected both by land routes and waterways with the renowned medieval ports like Chelitalo,Palur and Tarmalipti as a flourishing mart of Eastern trade.However, Cuttack became a capital city at the end of the 10th centuary CE.during the reign of Somavamansi dynasty.

The importance of Cuttack rapidly increased after the occupation of Odisha by Chohagangadeva early in the 12th century CE.Chodaganga transferred his capital from Kalinganagar to Katak which was more centrally located.The famous Barabati Fort was constructed in 1229 CE..by the famous Ganga ruler Anangabhimadeva III.



Maritime Museum, Cuttack

After the Ganges,Odisha passed intothe hands of the Gajapati under whom Cuttack continued to be the capital of the state.The reference from Ain-i-Akbari clearly denotes That Cuttack was a flourishing capital city during the time of Mukunda Deva in 1568 CE.On the eve of Afghan occupation,Cuttack was found a well guarded and heavily fortified capital.From 1751 CE,the Marathas ruled over until the beginning of colonial of British in 1803.

The Afghans however were not destined to rule Odisha and they were soon ousted by the Imperial Mughals. Cuttack continued to be the capital of Mughal Odisha and Abul Fazl celearly mentions that Mughal Governor was residing in that city. The accounts of foreign travelers and contemporary historical works provides an account of commercial and capital city.It was the capital of odisha under the Mughals and was designated as Katak Banaras in the mahal-list of Bengal province[19]..Abul Fazal,the court historian in Ain-i-Akabari (third volume of Akbar Namama) mentioned about his visit to Cuttack in 1592 CE.The 605.600 dam revenue yielding flourishing city had a nine storied building having residential apartment of governor,private houses and workshops.The Lalbagh palace built in 1633 was the residence of provincial governors[20]

The increase of of price of staple commodities due to great famine of Gujarat in 1630-332 and scarcity of piece goods in Musalipatnam compelled the English to move from Coromandal up the Bay of Bengal.Ralph Cartwrieght,William Bruton and four other Englishmen went to Cuttack to meet the Mughal Governor on 9th May 1633 CE and received the permission for trading and building of factories and ships. The English endeavour to have direct commercial enterprise in Odishan coast became successful.Cuttack was becoming a populous town having big markets.It was second best city after Dhaka in the province of Bengal,Bihar anad Orissa as mentioned by Thomas Bowrey in 1669.He had described it as as a city having nice buildings ,broad streets ,water springs and ponds.The provincial governor was rich and the place was full of merchants[21].The large city cannons placed on the walls had a factory belonging to English and the place was famous for corn,cattle and butter,oil and cotton clothes.Hamliton who visited the city in 1708 ,found that different kind of fine and coarse clothes are much cheaper compered to Balesore[22] . Next in the course of time Cuttack remaind a principal commercial and trade centre.

Nariso, Balipatana, Khurdha

During the field studies by AIHC&A department of Utkal University in the Prachi Valley have brought to lime light several Archaeological Mound and vestiges with thick occupational deposit. Nariso is one of the major maritime sites explored during the survey in the Balipatana Tahasil of Kurdha district. In view of its proximity to the sea as a major estuary of the river Mahanadi and the popular folk tradition of Maritime activities of the past, the site as it appears from our preliminary investigation shall yield tangible evidence on the ancient Maritime glory of Orissa. The trail excavation conducted at Nariso in 2009 have yielded cultural material



Excavated site, Nariso

dating back from the 4th -3rd Century B.C to 5th -6th Century A.D with Ceramic assemblage of Black and Red Ware, Red Slipped ware, Black Slipped Ware, Red Ware etc., along with inscribed terracotta pendants, Puri Kushana Coins etc. The material culture of the site is comparable to the material culture of Sisupalgarh. During the 2011-12 excavations season AIHC&A department of Utkal University in collaboration with OIMSEAS conducted archaeological excavations in the above site. similar cultural materials yielded as compared to the 2009 trial excavations i.e. 4th -3rd Century B.C to 5th -6th Century A.D.

Chitreswari

A place named Darsnibanta near Chtreswari has remans of maritime trade.It belived by the local people that the place was a port site more particularly a trading centre.The sanddumes,of course like Brahmavana sees to be a mound.We have made some surface explorations in the area and found different varities of pottery and a habitational mound. It is

believed that it was once port of Kalinga Sagar.The place is referred by the Islamic preacher (traveller) Jahania in his travellegue 'MUSTAFA'.(101-174.) The local historian late Bamadeb Mohaptra opines that in the medieval period (8-9th century CE) the Buddhist monks used this port for their vist to different South-East asian countries..It is also said that the Kalinga rulers have made Golragada (Fort) for the safety of the Buddhist monks.

In 1804 when the Britishers proceeds towards Odisha, at that time the ruler of Odisha Gajpati Mukundadev orderd his prime miamanta and Prime minister to obstruct the British army and assembled 18 Gada Samata and Paika leaders here to fight.One senapti Samanta Binayaka of Golaragada who was the chief of Marine army lead the army and fought bravely for which the British army could not ventured further.however the British army took the help of rebelled Charan patnaik and secretly enterd through the Chilika and attacked the Khurda Fort.the Britishers come out successful and imprisoned Jayee Rajguru.The ordered to hang Jayee Rajguru which was also taken place at Bagitota in Medinapur.But after his death the dead body was brought to this palce through sea and cremated here.this fact is described in Golaragada Samanta Vamsabali and Phiringi Kali Panudulipi.

This palce is the witness of congregation of great paika leaders.Further the Daru of Sudarshan has found for twice from this place.It was in the parchi vaelly and has the history and heritage great Odiyas[23].

Khalkatapatana

Khalkattapatna (860 02′ 40E″ E and 190 51′ 13″ N) is situated on the bank of the River Kushabhadra and on the right hand side of Puri to Konark marine drive about 3 km away from the Bay of Bengal (Fig. 1). In the year 1983-84 soil was brought



River cliff showing the cultural deposit, Khalkatapatana

from Khalkattapatna for the construction of a marine drive between Konark and Puri, while digging for soil archaeological remains were brought to light; subsequently, the Archaeological Survey of India (ASI) conducted excavations at Khalkattapatna. Archaeological Survey of India conducted excavations at Khalkattapatna in the year 1984-85 and 1994-95, in order to understand the historicity and nature of deposit of the site. The mound was extensively damaged because of quarrying earth for construction of the marine drive. The excavation brought to light a brick jelly floor which could have served as a loading and unloading platform14-15. The other findings include Chinese ware, celadon ware, egg white glazed and glazed chocolate wares of Arabian origin and indigenous wheel turned dark grey pottery. The main shapes included jars, vases, bowls, bowls with lug handles, miniature pots and lamps. Some sherds have mat impressions and stamped geometrical designs on their neck. These ceramics occurred throughout the deposit and all are wheel made. No structural remains were found during excavation; oven and hearth were

noticed, including numerous ring wells connected with houses suggesting their usage as soak pits instead of drawing water from the well. Even today ring wells and pottery pieces can be seen on the site. Two fragmentary and one intact Chinese copper coin with legends on both sides and square perforation in the middle were also been recovered during excavation[24].

Besides, terracotta figurines, spherical as well as arecanut beads with collar on one side and a few glass bangle pieces have been found.

Manikapatna

Manikapatana is situated on the left bank of a channel on Chilika (locally known as Tanda) which connects with sea near Arakhkuda. Arcahaeological Excavtions were conducted at Manikapatna during the year 1987 to 1994 by OIMSEAS. Manikapatana yielded a number of important antiquities ranging from neolithic to the British or colonial periods. This also gives a clear evidence of flourishing of the site as an important trading centre or port site throughout the century and even before the christian era as evident from the ceramic assemblage and antiquities of the site. The antiquities of Manikapatana included material from several South, South-east Asian countries, Sri Lanka, West Asia, Western Part of the Indian Subcontinent, including the Roman world. The evidence of Roman contact comes from the evidence of Rouletted ware and amphorae. Other notable findings includes terracotta beads iron implements, two Chola coin, Mughal coins, British coins and button, bottles of different varieties, one Ceylonese coin, one Chinese coins, Chinese celadon, Chinese porcelain. The pottery remains includes rouletted ware, red stamped ware with a grey core, grey wares etc. Imported pottery includes amphorae, knobbed ware, Chinese celadon, green turquoise glazed ware etc.

The noteworthy findings in numismatic of Manikapatana are as follows: Puri-Kushana copper coins, a Ceylonese copper coin with legend *"Sri Maya Traya Malla"*, a Chola coin of 'Ceylon man type with legend *"Sri Raja Raja"*, Two Chinese coins with square perforation with Chinese writings, Six Moghul coins (Trilingual) with legend *"EK Pai Sikka"*, two East India Company copper coins and one East-India Company medal with legend "B.I.S.N. Co".

A sherd containing kharosti inscription is found in the lowest layer (period - I) during the excavation. The sherd was kept in the miscellaneous category. But Professor B. N. Mukherjee of Calcutta University while examining the material has noticed the inscription and deciphered it as *"Dasatradeva"* and "Khida" in two lines. This Khorosthi inscription is the first of it/kind in Odisha and according to Prof. Mukherjee it might have come from North-West Frontier Province through trade link.

During excavation at Manikapatana thirteen numbers of terracotta ring-well of different varieties & sizes are unearthed. All these ring wells are situated in an alignment and are adjacent to the Chilika channel. The ring-wells are dug probably for drinking- water in the saline zone.

The discovery of Chinese celadon, coins, porcelain, Burmese pottery, Ceylonese coin and pottery, Indonesian, Terracotta, Siamese pottery, Arabian pottery, Roman amphorae and Rouletted ware and Khorostri inscription at Manikapatana clearly proved to be an international port side. Recent archaeological excavation at Sri Lanka, Indonesia (Sembiran), Thailand (Ban Don Ta Phet) and the discovery of Khorostri inscription and Rouletted ware and terracotta beads at Manikapatana also some light on the links of maritime contact of ancient Odisha[26].



General view of the excavations, Manikapatana



Exposed brick structure, Manikapatana

Gourangapatana

Gorangapatana is situated on Chilka Coast near Rambha in the Ganjam district of Odisha about 80 km from state capital Bhubaneswar. The ancient mound on the Chilka coast was jointly explored by OIMSEAS & PG Department of Anthropology, Utkal University under the leadership of Prof. K.K.Basa[27]. The site is situated in between Manikapatana & Palur. Large numbers of red ware, grey ware, black slipped ware potsherds are found in the surface. Few knobbed ware pieces are also collected during the survey. On the basis of surface findings and topographical situation it is presumed that this site could be the contemporary of Manikapatana Palur. Proposal for joint archaeological excavations with PG Department of Anthropology, Utkal University under the guidance of Prof. K.K.Basa.during the year 2014-15 has been done.But except some remants like potshrdes and beads nothing substantial remains found in the particular excavated site.However, the mound is spread over a large area and the modern village is existing on the mound.

Palur

The Greek classical text *"The Periplus of the Erythraean Sea"* (1st century CE) by an anonymous author mentions several ports and coastal towns such as Broach, Uzane (Ujjain), Sopara, Kalyana, Muziris, Mosalia (Muslipatna), Dosarene (Coastal Orissa), etc. Periplus further says "Dosarene" was famous for ivory". Ptolemy's Geography (2nd century CE) mentions several ports in the coastal Orissa like Kambyson near Hoogly, Manda, Munde or Mandu river mouth (possibly mouth of Mahanadi), Kannagara (near Konark), Kati Kardama (near Cuttack) and Palura (Poloura of Ptolemy). He says Palura as a major port of eastern India for sea-voyages to South-East-Asian countries/Islands. It was the point of departure (apheterion) for ships bound for Khryse (South-East Asian).

The Periplus Tex Exo Thalasses complied by Marcian of Haraklea (between 250-500 CE) also agrees with the point of departure (apheterion) as Palura. According to Ceylonese chronicles Datha-Dhatu- Vamsa, Dipavamsa, Chullavamsa and Buddhist text *Mahagovinda Sutta*, *Kurudhama Jataka* and *Mahavastu* refer to Kalinga's Capital as "Dantapura" a port town, from where the "Tooth relic" was transferred to Ceylon. Chinese Pilgrims Fa-Hein and Hiuen-Tsang who visited Odra in 639 CE, mention a famous port "Che-li-ta-lo" near the shore of the Ocean[28]

Palura profusely referred in the various literary works and foreign accounts as referred was an important exit point to South-east Asia on the southern part of Chilika. The site has been partially excavated by the institute in Ganjam district. Trade activities were known to have been carried on through this international port till medieval period. Recent archaeological explorations and excavation have brought to



View of the Palur hill

light immense wealth of past materials testifying to the prosperity of the port towns in bygone ages. Explorations from mouth the river Risukuliya up to village Praygi was conducted long back by the OIMSEAS in the year 1994-95.During the course of exploration several villages like Palibanda, Bichhnapali, Suryanagr and Purunabandha.The cultural materials from these sites include Iron slag and objects,terracotta wheel(broken),bengles, egg-white pottery,black and red ware,black slipped ware,buff colured shreds, black slipped ware, Chinese porcelain ,Burmese pottery,Europen porcelain,stamped ware etc.,were reported from these sites.During exploration an ancient Light house was located on the top of the Palur hill.This monolithic stone is about 3 metre high and the top portion is shaped like a lamp.Local people worship as Sikhareswara Siva as revealed from exploration report of OIMSEAS.(1994-95)[29]

A small scale excavation was conducted by OIMSEAS in the year 1994 at Palur in three different mounds near Pulur hill.The excavators reported that a small trenc measuring 5 x 5 metre was taken up and excavated up to a deapth of two meters up to the natural soil. From the excavation brick bates,red and grey pottery,shells,an inscription in *Khorosti* was found on a pot-shred.As the report revels,the inscription was deciphered by Prof B. N. Mukhrjee which read as a "*Shahaprata*", "*Sadha*" an "*Se*" of 2nd century CE. Kharosti inscription was also reported from Manikapatna, ofcourse in close vicinity of Palur. Besides terracotta bead of aricanut shape ,Jars,dish on stand etc were also found.The stratigraphy of the site goes back to 2nd century CE. (OIMSEAS Report 1996)[30]

Potagarh or Ganjam Fort

The Ganjam Port was fortunate to have situated on the mouth of river-Rusikulya. The geographical location of Ganjam Port

is between Latitude 19022N and longitude 850 04'E. As the history reveals, the port was occupied first by the French who had established one factory and a commercial centre on the bank of the river, Rusikulya. The attempt of Robert Clive to capture Ganjam on 3oth, October, 1759 was not successful. By the end of 1759, the French abandoned the Port. And in 1768, July, Mr. Cotsford – a Military Officer and Engineer, occupied it. He rejuvenated the old Port and reconstructed on the ruins of it which served as Port and Fort lcally known as Potagarh.

In 1768 Cortsfort built this fort on the mouth of the river Risikulya. Situated close to river Rusikulya, the fort is surrounded by a moat. The remnants of majestic fort houses and a buried tunnel specks, the melody of glorious past of Ganjam city, which was cursed by a dreadful epidemic plague in the year 1815 CE. The place attracts students, scholars and history lovers due to its best geographical location close to the confluence of river Rusikulya with Bay of Bengal which was ofcourse a commercial center as well as a strategic sea outlet for the British army. it often reminds the maritime heritage of the past.

The fort of Potagarh is described by the celebrated historian W.W.Hunter having towers in the star angles except in the east front where there is a large gateway, the walls neither under 18 nor above 22 feet in height and a ditch running in three sides in many parts with deep water and in the fourth side defended by a thick wood which runs to 150 yards from the walls". Potagarh tells many stories of horror relating to the wrath of the fort-goddess on the ancient village of Ganjam and the escape of the king through the secret passage into the Bay of Bengal by a boat at the time of attack[31]. The fort Potagarh is an archaeological asset of the state.

It was a flourishing port towards the end of the 18th and beginning of the 19th century. The bed of the river- Rusikulya

was situated and gradually receded towards south one kilometre away where the present Rusikulya flows. Although the port was navigable but the depth of the water was shallow and so the ships anchored at a distance of two miles from the coast. A mortal calamity loomed large in the fate of the local people. The severity of the fever which took the epidemic form, killed thousands reducing the population of 30,000 in 1815 to 6000 in 1818. Many fled away from the town and all the establishments of the Govt. were shifted to Berhampur leaving it into a desert and desolate site.

However , the near by **Gopalpur Port** was functiong up to the year 1942. The process of export and import was a daily business of the local and European traders. The following commodities were exported to Huguli, Calcutta, Java, Sumatra, Rangoon, Pondichery and Bombay viz. cotton pieces, raw hides, raw skins, liquors, gunny bags, timbers, lacs, sugar, wine, ghee, paddy, turmeric, salt, coconuts and living animals like cows, goats and sheep. And the local merchants imported



Potagarh Fort, Ganjam



Ferry boat Barua river

commodities to the Gopalpur Port were medicines, brass metals, betel-nuts, coffee, cardamam, ginger, pepper, cigarettes, candles, steels, iron, woollen garments, shawls, chemical products and gun-powder. Mr. Minchin of Aska Sugar factory imported heavy machineries from Germany and England for his factory through this Port.It was a thriving port which had fulfilled the demands of the customers for two centuries. During the Second World War, the business of the port was greatly impaired. The Japanese soldiers occupied the entire Burma and a port of the Bay of Bengal in 1942.

Sonapur, Ganjam

On the Odisha- Andhra Pardesh border there is a Beach along the river Bahuda which divides the sea from the main land at Sonepur. Pati Sonepur is the name of the Beach at the other side which is famous for its virginity, colourful water and loneliness Nearest railway Station is Sorola, (12 kms) but major station is Berhampur- 30 kms. It was an important seaport of soth Odisha in the late medieval period.At a particular point of time it was the principal shipping center for the

navigators.Excellent quality of oysters were found here which constituted one of the principal item of export from this port.The Indo-Arabic social custom and practices that are followed in the nearby villages even today establishes it as medieval port.

Barua

Kalingapatnam and Barua, ancient sea ports of yesteryears in north Andhra Pradesh coast. Baruva in Sompeta Mandal is situated at a distance of 109 Kms from Srikakulam town. The famous Sri Kotilingeswara Swamy and Janardhana Swamy temple are located at this place. The river Mahendra Tanaya Merges into sea at this place. Thousands of people take sea bath during festivals. Baruva was once an important seaport. Two obelisks, one of black and the other of white, of fifty feet height above the sea level, mark the seaport. From the accounts of Ptolmey it is known that the port town Barua was one of the trade centers in the east coastduring historical period.Basudev Somayaji, the author of Gangavamsanucharita, has described that he went to Puri from Barua port by a boat and returned on land route to Khalikote after crossing Chilika lake in aboat in the year 1762 CE.

Salihundam

These two places Salihundam and Kalingapatinam are now in Srikakulam district of Andhra Pradesh boardering Ganjam district.But in the historical period these were part of Odisha. Salihundam village got into prominence because excavations revealed the existence of an ancient Buddhist settlements. Situated 18 Kms from Srikakulam on the right banks of the river Vamsadhara. This place was known as "Salivatika" (meaning rice emporium) in the past. But the locals call it as "Salyapetika" (meaning box of bones or relics), for the only reasons that large number of human bones were found from this place while carrying out excavations.



Stupa, Salihundam



Stupa, Kalingapattanam

A maha stupa, votive stupas, chaityas, platforms and viharas have been unearthed here with inscriptions date back to the 2nd century CE. The main stupa on a hilltop measures 46 feet in diameter while the maha vihara *salipethaka* has an entrance in the shape of Swastika. Significantly, this was the place from where the message of Buddhism spread to Sumatra and other Eastern countries[32].

Kalingapatnam

Kalingapatnam Beach is situated 30 Kms from Srikakulam and is very near to Sailihundam. This scenic spot was an ancient seaport. European merchants resided here during the regime of the East India Company. Places of interest include a light house and a Buddhist Stupa. This beach boasts of a rich history. In Kalingapatnam the River Vamsadhara meets the Bay of Bengal. It is one of the nearest beach resorts to Srikakulam town. Kalingapatnam was also one of the ancient harbor towns. A big brick Stupa of Early historical period made of spoke and wheel method was excavated by Archaeological Survey of India. The importance of the place could be best judged from the placement of the Buddhist Stupa and very close to Salihundam.It was a port town of ancient Odisha particularly during the ascendency of Buddhism.The surface exploration makes us understand that knobbed ware,roulette ware,red slipped ware etc have collected.The Perfumes, textiles and other commodities were exported to the rest of the world from this port.[33]

Kalingapatnam is situated 30 kms fron Srikakulam Town. This scenic spot was an ancient seaport and European merchants resided here during the regime of the East India Company.

Dantapura is one of the historical places near Amadalavalasa. This village situated on the way from

Amadalavalasa to Hiramandalam, 10 km from Amadalavalasa. Ancient Buddhist stupa is found in this place. It is an important archeological place, called *Boudha Gynana dantha puri*, where during the exploration found some bricks, pots, knobbed ware, terracotta articles, bangles, beads, stone and iron objects. It is elevated in the 261 BCE after Kalinga battle by Ashoka Chakravarthi. Kalinga rajas treated as capital of their region. The Boudha Gynana danta collected and presented by Arhat Kheru Terudu to Brahmadatta Raja of Kalinga. Brahma Datta the then Kalingan king constructed a monument on Boudha Gyana Danta in this place so the place is called Danthapura. This is a fortified site with well built mud fortification surrounded by a moat on the right bank of river Vamsadhara.[34] Dantapura is being taken for discussion because there are many references found (see chapter-II) in Buddhist literature as the capital of ancient Kalinga.However, the location of ancient Dantapura is yet be covienciengly identified.[35]

Inland / Riverine Trade Centers

Buodh

Boudh played an important role in the diffusion and flourishness of early Historic tade activities. It is evient from archaeological findings from Maryakud and Raithani which includes Knobbed Ware, fine Black Slipped Ware etc. As the region is located in the central part of Odisha and is rich in forest and gem resources, trading activitiy was abovious. Besides, there are also several indigenous boat building stations at and around Boudh.

The trade activity centring Boudh was vibrant up to the British period. Generally gemstone, timber, forest produces, medicinal herbs which are abundantly produced in the regiob were traded to coastal part of Odisha as also to far off places

in Central India like Vidisha and Ujjain. This type of trading activity is still opeorated in the Mahanadi. Generally the trading items are transported by boats known as Patua and Kusli. Even there is regular trafiffic of trading goods from Sambalpur to Cuttack[36].

Manamunda-Asurgarh

Manamunda-Asurgarh is about 49 km to the northwest of the Boudh district headquarters located in the central part of Orissa. The Early Historic fort is located on the right bank of the river Mahanadi, a little away from the confluence of the river with the Tel. It is represented by at least six habitational mounds that have formed in a linear fashion. The site was surveyed and interpreted before Indian independence (Benerjee 1920: 64-86). The site spreads over an area of 1.5 km north-south and 0.5 km east-west. A defense wall made of burnt bricks, and partly disturbed by the river Mahanadi, is visible along the right bank. In fact, the present day settlement of Manamunda is located just on the ancient settlement and hence its extent could not be traced. The site was subjected for a limited excavation by the Sambalpur University in 1982 and in 1990[37] (*IAR* 1990: 80-85). However it was important riverine trading center on the confluence of the Mahanadi and Tel river.

In the initial excavation two small trenches were dug vertically in addition to exposing two brick structures as well as two brick pillars around the periphery of the site. Besides, the excavation also yielded the skeleton of a child, Northern Black Polished Ware, Black Slipped Ware, Red Slipped Ware, Fine Grey Ware and Red Ware with a Grey Core resembling the potteries of Chandraketugarh region. The antiquities of the site included iron objects of war and peace, domestic objects, beads of semiprecious stone and terracotta and other minor specimens of daily use.

In the second phase of the excavation conducted in 1990, two mounds were dug up to the virgin soil. The excavation revealed cultural material from 3rd/4th centuries B.C. to the 3rd century A.D. From the trenches a variety of pottery specimen were collected which resembles with the findings of the earlier excavation. A punch-marked coin bearing five symbols; reverse-one central symbol i.e., four taurines with a central dot assigns the coin to 2nd century BC.

Further intensive and extensive archaeological work was carried out at and around the site to understand it in a holistic perspective. Several theoretical paradigms were implied to understand the exact function of the site. Interpretations were made after a careful observation of the landscape as also the cultural material found from surface exploration as also from section scrapping. A detailed study revealed that the site was protected on the north by a massive defense wall running parallel to the banks of the Mahanadi to check the flood activity of the river. The site was bounded by the Tel river and Mehrni (a small stream with reasonable depth and width) on the west and the east respectively. A moat ran along the southern periphery of the site; joining the Tel and the Mehrni. It is partially visible now in the form of a huge depression and the length of the moat is roughly 3 km and the width is 2.5 m. From the surface as also from, the section scrapping a number of ceramic types were collected and a scientific analysis was conducted on the pottery as also on faunal material. The archaeological material found from the site is very significant as it revealed the existence of coastal Orissa pottery as also potteries of the Middle Ganga Valley and Chandraketugarh-Tamluk region which was proved by X-Ray Diffraction analysis of ceramic types[38]. The faunal assemblage of the site has also been dated (Fluorine/Phosphate Analysis) and analyzed[38] .This archaeological study proved that the site was an important trading centre.

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Kharligarh

The Early Historic site of Kharligarh is situated in Tentulikhunti block in Bolangir on the boarder of Kalahandi district, at the confluence of the Rahul and the Tel rivers in a densely forested environment. Two more streams, the Khadang and the Singda, flow on both the sides of the Rahul river at about a distance of 5 km to meet the Tel river off Kharligarh. This area is occupied by a number of primitive tribal groups such as the Gonds, Bhuyas, Khonds and Saoras. The ruin of this fortified city lies in loose lateritic soil, in an extensive area stretching from the Tel to the Rahul river. The fort is almost square on plan, circumscribed in the north, east and south by the rivers acting as natural defense and the west by an excavated moat connecting both the rivers. The rampart consists of burnt bricks of size (40 X 25 X12 cm). The central part of the fort contains a shrine in ruined form, probably the presiding goddess of the fort. Although the northern rampart is greatly denuded by the river exposing the terrace and the basement, the river-worn stone gravels topped by brick wall of about 15 ft. wide, the major part of the fort lies intact. The site has revealed brick structures, a large variety of pottery, iron objects of war and peace, beads of various stones, axes, querns, choppers, microlithic artifacts, smoking pipes, metal bangles, earrings, copper Kushana coins, etc. However, the site needs to be thoroughly plotted and excavated in a horizontal manner. The ceramic assemblage of the site include dish in Burnished Black Slipped Ware with slight concave wall, inverted simple rim, flat base, well-fired and of fine fabric, basin in Black Slipped Ware with internally projecting triangular rim, salt glazed and of medium fabric; the bowls in Black and Red Ware with inverted simple rim, thin wall, well-fired and fine in fabric and finally Red Ware with disc base and of course fabric[40] .

Budhigarh

The site of Budhigarh lies 500 m to the east of Madanpur Upper Primary School. It is an extensive mound with a height of 3 m and covers an area of 1000 X 500 m in north south direction. It is situated on the banks of the Puruna Nala, meaning old channel, which could be an artificially dug out moat and the Rahul river which ultimately joins the Tel river.



Excavated brick structure, Budhigarh

Most part of the mound has remained intact, except the middle portion where a path has been made by the villagers. The artefactual evidence from the site indicates that the site was occupied from the Early Historic to the late medieval period. The site has revealed a wide spectrum of ceramics, beads, coins, bricks, terracotta objects, iron implements, idol of Durga and Ganesh and a large quantity of faunal remains and human skeletons. The bricks from the site measure 45 X 30 X 8 cm[41].

The ceramic assemblage of the site consists of dishes, bowls, miniature bowls, vessels, basins, dish-on-stands and lids. The dishes are of Burnished Black Slipped Ware with slightly inverted, simple rim, convex body and of fine fabric, the Burnished Black Slipped Ware with slightly inverted beaked rim, appears to be slightly salt glazed and of medium fabric. The bowls are in Dull Ware with external projecting simple, thin wall, traces of slip found on the outer surface and of fine fabric; in Red Ware with externally projecting short-beaked rim and medium fabric. Besides, a miniature bowl in Black Slipped Ware with externally projecting, triangular rim and of medium fabric, has been found. Globular vessel (*handi*) in Burnished Black Slipped Ware with externally projecting short-beaked rim, narrow mouth, thin wall and of fine fabric, and vessels in Black Slipped Ware glazing at the surface are the prominent vessel types at the site. The other ceramic types are large basins in Red Ware with inverted simple rim and appliqué design on the neck, dish-on-stand in Black and Red Ware, lid in Grey Ware, bowls of Northern Black Polished Ware and Knobbed Ware .[42]

Narla-Asurgarh

Asurgarh, as the name suggests, appears to be the most important Early Historic settlement in the hinterland Orissa, located near Rupra Railway Station, about 2 km from the Narla village. The fort, square in plan, each side measuring 1200 m,

had four wide gates in four cardinal directions, and at each gate was installed one guardian deity. The river Sandul flows by the western side of the fort encircled by a moat on three sides which is fed by a huge tank still existing today. It has been interpreted that water was being brought through two sluice gates to fill up the moats. The entire ancient tank or lake area covers an area of 200 acres. It was designed in such a way that when the fort was surrounded by enemies, a secret sluice could be opened so that the whole area both inside and outside of the fort would be flooded with water and consequently the enemy would washed away. The central part of the fort would remain as an island if such a flood was created because this part of the fort was on an elevated land. Presumably, the palace was constructed at the centre of the fort.

The site was subjected for a limited excavation by the Department of History, Sambalpur University[43] (Sahu 1982: 1-8), which revealed fascinating results. Although it was published in a regional journal, the importance of the site in terms of hinterland urbanization can not be ignored, as per the archaeological material.



Mud Fortification Wall, Narla Asurgarh

The excavation at the site consisting of two small trenches, have revealed paved house floors, an array of ceramic types such as Black and Red Ware, Black Slipped Ware, Fine Grey Ware, Red Slipped Ware, Northern Black Polished Ware, and most probably Rouletted Ware, iron implements of war and peace, beads made of semiprecious stones, punch-marked silver and copper coins, terracotta figurines, glass bangles, amulets and ornaments. A hoard of 539 silver coins, belonging to the 3rd century BCE. to the 5th century A.D. and collected by the King of Kalahandi furnished considerable cultural data. The first group of coins (69) are assignable to the pre-Mauryan period, the second group (272) to the Mauryan epoch and to the Guptas. The coins found at the site indicate that there was probably a mint at the site for fabrication of punch-marked coins. The similarity of some coins of the punch-marked coins of Asurgarh with those found at Bijnor and Paila near Koushambi, and the similarity in texture of fabric of some pottery types of Asurgarh with those at Ahicchatra further indicate that there was a brisk trade during the Mauryan period between Asurgarh and prosperous towns like Koushambi and Ahicchatra in North India as also with Sripura, Vidisha and Ujjain.

While narrating the historicity of the fort, Sahu (1982: 1-8) opines that Asurgarh bears a special importance as far as the Atavika people are concerned. These people find mention in the Ashokan Edicts and are considered to be constituted the fighting forces of Kalinga against Ashoka in his famous Kalinga war. The Atavika land comprised roughly the present districts of, Kalahandi, Bolangir and Boudh-Sonepur regions of Central and Western Orissa and Bastar in Madhya Pradesh. It was an important recruiting ground for the veteran army of Kalinga even as early as the time of the Mahabharata war. Asurgarh seems to be the capital city and the most important

centre of Atavika territory and the excavation amply indicates that the area was not underdeveloped during the days of Ashoka and the people had a high standard of civilization characterized by well-polished potteries of the Northern Black Polished fabric. No doubt, Asurgarh was an important political and commercial centre situated on the highway joining South Kosala and Mahakantara with Kalinga. In the 4th century A.D., the fort of Asurgarh appears to have belonged to king Vyaghraraja of Mahakantara whom Samudragupta claims to have defeated in course of his south Indian campaign. The excavation indicates that the fort area was deserted after 5th/6th century A.D. and as such, it may be said that Tusti was probably the last known ruler of Asurgarh[44].

The ceramic industry at the site comprises of dish, bowl and vessels. The dishes are in burnished Black Slipped Ware with inverted simple rim, thin wall, the vessels are in burnished Black Slipped Ware with complex externally projecting short beaked rim; in Red Slipped Ware with narrow mouth, concentric corrugation at the interior body and grey core. All types are of fine core.

On the banks of Mahanadi in the middle of 16th century there were urban centers like Sambalpur,Boudh,Binika,and Sonepur .intra –regional trade was carried out bringing about remarkable changes in the social and economic life of people.The urban centers of western Odisha were connected historically with eastern Chhatisgarh region and eastern Odisha through the river Mahanadi facilitating intra-regional trade in commodities like cotton,ivory,precious stones,paddy ,cereal,salt and medicinal herbs.The volume of river borne trade began to decline only after coming of railway.A large number of shrines of Gods and Goddesses were constructed catering to the religious need of the people and at the same time trade and riverine Godessess to protect the traders.

Sambalpur ,which literally means the town of wealth rose into prominence in medieval time after it became the capital of the Chauhan king Balaramdev in 1570 .the region was famous as a dimond –producing center[45]. A trhriving dimond trade was there as evident from accounts of T.Mootte in 1799. Sambalpur became the center of political ,commercial and military activities with the expansion of Chauan kingdom.Suvarnapur (modern Sonepur) was not only an important capital city in medieval western Odisha ,but also was an important center for export trade through river.

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5

TRANS–OCEANIC INTERACTIONS OF ODISHA

The maritime cross-cultural link of Odisha with other Asian countries like China, Sri Lanka, Indonesia, Myanmar (Burma) and Thailand could be gleaned through the available source materials, particularly from archaeological discoveries. Relations between the western parts of South-East Asia and India may go back well into the prehistoric times. Traders and shippers from both sides were involved, and as we find groups of traders from particular places would reappear annually at the ports with which regular relations had been built up and would reside there during the trading season. This historical phenomenon has been reflected in the archeological findings from the level of pre-history to the modern periods, be it shouldered celts, potteries, beads, sculptures, inscriptions, temples or art objects, archeological sites as well as language and literature.

Although many scholars have contributed significantly, exploring historical sources and had a good number

publications Here, an overview is discussed for easy understanding of Odishan Maritime links with other countries. Previously, many researchers, scholars of history and archaeology have traced the ancient relations on the basis of evidences that are available on both the sides, still historical resources of the area are yet to be explored. The pioneers in the field are R K Mukharjee, R C Mujumdar, H B Sarkar, B N Mukharjee, K S Behera, K. K. Basa, H. P. Ray, Jean Francious Salles, D. K. Chakravarti, A.P. Patnaik, Sila Tripati, Tansen Sen, A. K. Patnaik, B. Patra, and others but here an attempt has been made to present a diachronic study, taking together the latest findings for further research.

The voyage of Buddhist missions to South-East Asian countries and China gives us valuable evidence of the historical development of Buddhism in those regions. Further, it provides us with specific instances of the cultural relations of these countries between China on the one hand, and India on the other. Early Buddhists in South-East Asia devoted considerable attention to their competition with Hinduism for devotees and resources. In China, Hinduism never made an impact, but in South East Asia the two religions competed on more or less equal terms for adherents for about a thousand years. This was true in India too, but whereas in India the struggle was eventually decided in favor of Hinduism, in South East Asia, the outcome was the opposite. Scholars opine that between fourth to fourteen centuries, Indian culture, religions and political ideas spread a significant role in the politico-cultural landscape of South East Asia. When civilizations meet, they do not necessarily clash but can cohabit and cooperate. They do not compete, but can learn from each other[1]. Historians used a variety of expression to describe the adaptation; how Indian culture and political ideas were "absorbed by the local population and joined to



Indian Ocean Trade Route

their existing cultural patterns"[2] . While South-East Asian rulers and societies used foreign ideas, they did so selectively. For example, kings used the Indian caste system to describe themselves ,but the caste system did not catch on in society in large. South-East Asian art, while drawing upon Indian models, developed its own distinctive forms. The use of Sanskrit, wide-spread in government and religion, slowly waned as South East Asian used Indian scripts to represent their own language[3] (Osborne 1979 :25).However, Sanskrit continued till fifteenth century in Champa, while in Cambodia it remained dominant till fourteenth century and in Java only until tenth century[4]. Let us have a glimpse of Odisha's overseas relations with different countries of Indian Ocean Rim as well as South-East Asia.

China

Both China and India have a long and great history that goes back thousands of years. The Chinese and Indian civilizations

are among the oldest of human civilizations. They represent the two pillars of the civilization of the East. The towering Himalayas have not prevented them from mutual attraction and illumination. The cultural intercourse between India and China was mainly carried on through important routes : one, over-land route through Central Asia to India; another, sea route, starting from the port of Kuang-chou through South China into Indian Ocean[5]

The over-land route was older and the sea-route became popular with advancement of science and culture during T'ang Dynasty. The ancient route passed through one of the caravan towns and the Chinese territory of Tun-huang, outside the Great Wall, on the edge of the Gobi desert and then through the province of Kan-su to Ch'ang-an and Lo-yang. This overland route with its cities and towns was 'terra incognito' to the Chinese till the second century BCE. In the seventh and eighth centuries , navigation became a little easier and safer with China's progress in ship-building and mariner's compass. Such dangerous route were used by the *Sramans* who built up the cultural relation between India and China.[6].

Fa-hien and Hiuen Tsang, two eminent Chinese monks of the Jin and Tang dynasties respectively and Boddhidharma of ancient India all made outstanding contribution to religious and cultural exchanges between China and India. Between the fall of Han Dynasty in 220 CE and the establishment of the Sui Dynasty in 589 CE, Buddhism developed rapidly in a politically fragmented China. The process of translating, interpreting and cataloguing Buddhist texts from South Asia also advanced during this period. Monastic institutions ,temples and cave complexes associated with Buddhism spread throughout the northern and southern regions of China.The Chinese monk Falin (572-640 CE) reports that in northern China during the Northern Wei period (386-534 CE)

there were 47 "great state monasteries" ,839 monasteries built by the royality and the elities and more than 30,000 Buddhist temples constructed by commoners[7]. In the south ,on the other hand ,there were 2,846 monasteries and 82,700 monks.

It was also during this period that Chinese monks started making pilgrimages to the sacred Buddhist sites in South Asia. Artifacts used in Buddhist rituals, images of Buddhist divinities and literary genres imbedded in Buddhist texts began having discernable impact on Chinese traditions and lifestyles. Various regions of Central Asia, including the oasis town Miran, Khotan and Kocho became integrated into networks of Buddhist exchange across the Taklamakan Desert. Similarly, the maritime politics of Southeast Asia encountered streams of Buddhist missionaries and ideas as transmitted through local ports and towns on their way.

China was one of the earliest eastern markets for Indian cotton. During the later Han dynasty, c. 25-220 CE., the Chinese came to know about xibu (fine cloth) through direct and indirect contact with Indian traders[8].The Chinese needed large quantities of white cotton cloth for the uniforms of their soldiers serving

SEA ROUTE FOLLOWED BY FA-HEIN IN HIS RETURN JOURNEY TO CHINA



in dry, hot regions, and it remained a valuable import for a long time. White cloth was accepted as tax and used for payment to the imperial officers and soldiers. The same cloth later came to be known as *kanipha* in Ming dynasty, *bafta* in Thailand and *kain* in Malaysia[9]. Indians used to carry the cloth to SouthEast Asia on the way to China, while Southeast Asian countries re-exported it along with other commodities. The *Silappadikarm* refers to this growing trade which included agile, silk, candy sandal, salt and camphor[10]. Fahien mentions Indian merchants conducting trade with his country. He calls the cotton fabric trade of India po-tie which is connected with the Sanskrit word pota or patti in Dravidian language.

The history of the Song dynasty in China refers to the arrival of envoys from He-luo-dan (a locality perhaps situated in Sumatra).Among other things that the envoys brought with them were Indian textiles. This is the first reference to the export of Indian textiles from India to Southeast Asia[11].

Textiles were the binding factors in the cultural history of these two regions from ancient times. One of the early civilizations in Java was Taruma Nagara (5th centaury CE.) Taruma means indigo and nagara comes from the Sanskrit word *nagara* means city state. Indigo was the dominant colour in the dyed and printed trade cloths of India[12]. The two coastal regions of the Bay of Bengal, particularly Kalinga, were an important source of cotton textiles traded to South east Asia at an early date. Kling was used in the Indonesian Archipelago as a common term for South Asians and Kling cloths for textiles.

The sea route to China in ancient times was very popular. Chinese traveler Fa-Hien (c.5th CE) has narrated that, he stayed for two years at Tamralipti which was a famous port of Kalinga and returned from India to China via Ceylon and Java by sea route. Fa-Hien is known to have returned to China



Chinese coin, Manikapatana

in a large vessel having 200 passengers. It is referred that another Chinese pilgrim scholar Hiuen Tsang (Yuang Chwang) in c.7th CE had taken the sea route to China in his return journey who also visited Kalinga, Utkala and Odra (Odisha). I-Tsing left Tamralipti by the sea route through Sri Lanaka to China. He tells us that he embarked on a Persian boat from Canton in 671 CE. He stayed for six months in Palembang for learning Sanskrit or the *Sabdavidya*, then he passed through Malayu (Sumatra), Kedhah, Nicobar Islands and finally reached Tamralipti in eastern India. On his return journey, he stayed for some time in Malayu (Sumatra) in 689 CE.[13]

Sea route was preferred since the central Asian land route was not safe. During the rule of Bhaumakara king Subhakara Deva, (8th -9th century CE), a Buddhist monk from Odvisa (Odisha) Prajna visited China with an autographed Buddhist manuscript of the king through the sea route. According to Chinese sources, in 795 CE, an autographed Buddhist manuscript *Gandavyuha-* a part of *Avatamasakasuttra* was presented to the Chinese Emperor Te-tsong in 795 CE.[14]. The manuscript and the accompanying letter were entrusted to the monk Prajna for translation. We learn from Hiuen Tsang that Prajna who was born at Kapisa, had commenced his studies in northern India and continued in Central India

(Madhyadesa) where he had resided at Nalanda. During his stay he visited the sacred places and completed eighteen years in learning. Afterwards he had settled in the monastery of king of Wu-Cha (Odisha) to study *yoga*. He then moved to China, and made his debut there in 780 CE., by a translation of the Mahayana Buddhist text – *Paramitasutra* [15]

His voyage to China was very troublesome. While he was in south India he learnt that Manjusri Boddhisattva had his abode in China,therefore he decided to mark on a ship sailing for that country.It is recorded that when he was almost in the vicinity of Canton,an unfavourable wind brought his boat some where close to Indo-China or Cambodia.This is streangthened by the fact that after some time he collected funds and built a large boat, and then he travelled extensively all the countries in the regions of the South Seas. Again his boat was capsized by a storm,though he managed to save himself from drowning and salvaged his Sanskrit texts .He reached the city of Canton in 780 CE. and six years later he arrived at Changan in 786 CE. In 792 CE, he was under the patronage of Emperor The-tsung (779-804 CE) who asked many Chinese Buddhist scholars to help him in hist task of translating Sanskrit works. His translated work, the *Mahayanbuddhi-satparamita –sutra* is well known. Many well known cases of Indian, Central Asian and South-East Asian Buddhist teachers undertook their journey by sea route to South Seas and Far East,especially China for the propogation of Buddhism[16].

This indicates that till 8th -9th century CE, Kalinga maintained cultural and commercial relations with China. The travel of scholar pilgrims was possible as merchant vessels were plying between Kalinga and China. Chinese sources further mentioned to Kalingan sea-going vessels of two different types. From the account of Wang Van Yuun (14th

century CE.) it is known that popular product of Wu-tu-cha (Odiyas) were rice, bees-wax, fine cotton fabric and semiprecious stones etc. Wang Telynan further stated that for the cheaper living condition in Kalinga, nine out of every ten persons coming here for trade preferred to stay on. Rice was known to have been sold at a throw-away price of 46 baskets for one cowrie, Kalinga mostly imported gold, silver and silk from China.

The relationship of Odisha and China are reflected with the findings of archaeological materials. The Chinese stamped ware shreds are found from Khalkatapatna, an excavated port site near Konarak are similar to that of the findings from of Kota China of North Sumatra and Bagan of Burma which are datable to the 12th and 13th centuries. Distinct paddle marks can be seen on these sherds. On the left side of the Chinese sherd pond, lotus leaf and flower with a stock of the bunch is depicted, whereas the other sherd is decorated with blackberry vine and scroll with leaves. These sherds belong to the Ming and Yuan Dynasties respectively, and datable to the 15th century CE[17]. Khalkattapatna port was active during the rule of the Ganga Dynasty of Odisha.

Two Chinese copper coins with square perforation in the centre were found from stratified contexts of Manikapatna excavation (OIMSEAS) which gleans Odisha's relationship with China during medieval period. Besides, Chinese potsherds like kaolin, celadon, porcelain also reported from the excavation which strengthens the above discussed historical facts

After early 12th century the next appearance of the name of Odisha is to be found in Wang-Dayuan's Daoyi Zhilue (Records of Foreign Lands) compiled in 1350 CE after the author had visited the countries of the South-East and South Asia, as well as some of the Central Asian countries. The

country has by then acquired its present name from Udra or Odra. It is now called *Wu die* in Chinese. The first sentence in the notice is translated as, "it is the old name of *Yanjaili*. It seems that, as Ray remarks, this is due to wrong reading by omitting the first character *guo* (the doubt having arisen because of its meaning being country). He thinks the four character quo-yin-jia-li stand for the country name. The second character which should be *ling* has been wrongly written as *yin* due to the copyist's error or the author's negligence. Thus, it should read as *quo-ling-jia*,he fourth character li having been interpolated. Guo-ling-jia is the ancient Kalinga which was written in the earlier dynasties as Ho-ling or Jia-ling. The sentence should then mean, "it is the old name of Klainga"[18].

The country is described by Wang as bare and swampy, its hills and woods are rare. The people depend on agriculture, the soil being fertile, gives three bumper harvest in a year.The people are honest and more prosperous than their neighbors. The taxes are one tenth. The natural product include kingfisher feather, wax, cotton and fine textiles. The Chinese paid for these items with gold, silver, colored satins, white silk, cloves, nutmeg, white and blue China ware, drums, lutes etc.

Thus, till the late medieval period there were hectic commercial and cultural contacts with the Chinese world. However, more field research in this direction is absolutely necessary to exploit Chinese sources on Kalinga or Odisha to know more about maritime history and Buddhist heritage.

Ceylon

Since the 5th century BCE, there were cultural relations between Kalinga and Ceylon. Kalinga was known to the people of Sri Lanka from the earliest days of island's recorded history. The Buddhist books, specially the Pali texts, mention Kalinga several times.In the Jatakas, a king of Kalinga, named Karandu



Sacred Bodhi tree, Sri Lanka



Tooth Relic Temple, Kandy, Sri Lanka



Copper coin, Manikapatan

is mentioned as the contemporary of king Nagnajit of Gandhara and Bhima of Vidarbha.This is corroborated by the Uttaradhyayana Sutta[19]. In the Mahagovinda Suttanata we find the name of another king of Kalinga named Sattabhu, who was contemporary of king Dattaratta of Benaras. According to this text also Dantapura was the capital of Kalinga[20] As narrated in the Ceylonese records (*Dipavamsa & Mahavamsa*) king Vijaya, son of Simhabahu of Simhapura in Kalinga was the 1st king of the land in the 3rd century BCE.[21]. Here mention may be made that from Radhanagar excavation a Couch design pendant is discovered having inscribed in **Bijaya** in Asokan Brahmi letter. The pendant was also discovered from startigarphical context of Mauryan period[22].(OIMSEAS).Of course more research is necessary in this aspect. Kalinga one of the earliest names of an Indian region (along with Vanga and Magadha) with which Sri Lankans are familiar is also mentioned in the Pali Buddhist literature that came into the island as a consequence of the introduction of Buddhism by the Ven Mahinda during 3rd century BCE. The *Majjhima Nikaya* (1.378) refers to forests of Kalinga and the *Digha Nikaya* (19.36) to the coastal settlements and the capital city Dantapura.

Sanghamitra, daughter of Asoka went to Ceylon by sea route through the famous port Tamralipti of Gangaridae Kalinga.



Inscription of king Nisanka malla, Sri Lanka



Polanaruva SriLanka

The tooth relic of the Buddha was taken to Ceylon during the rule of Sri Maghavarman from Dantapura in Kalinga in 310 CE. Hemamala and Danta Kumara took the sacred emblem. From early time there were matrimonial relations between the royal houses of Kalinga and Simhala. The story is related very briefly in the *Mahavamsa* (37,92- 97) and in almost epic proportions in the 12th century Pali poem. *Dathavamsa* by the Van.Dhammakitti, evidently based on a Simhala poem, Daladavamsa by name composed at the request of king Meghavanna during whose reign (301-27 A.D) the relic arrived. Now, the tooth Relic is in the Temple of Kendy and venerated by Ceylonese with high honour[23]. The author was at this temple in Oct 2013 and observed the ritual. The 10 days tooth Relic Festival is being observed here like that of our Rath Yatra. Incidentally, the two festivals are observed in the same month.

A Seal of pre-Kushan (2nd-1st century BCE) period has been recovered from Radhanagar excavation in the year 2007. The inscribed seal reads as *Sadabhu Tissa*. (OIMSEAS). It is referred in Srilankan genealogy that King Sadatissa (77-59 BCE) was one of the rulers of Ceylon. It is said that king Tissa sent a mission to India to bring the collar-bone and other bone-relics of the Buddha and that it returned with these relics and also the alms-bowl of the Buddha. The collar- bone was kept in the Thuparama dagaba, which thus became the first Chaitya to be built in Sri Lanka. Early Buddhist missionaries from India who left for Sri Lanka also took Pali sacred texts with them and these remained preserved there for ages. The title *Devanampiya* might have also been adopted by king Tissa through his enthusiasm for Asoka. This regular exchange of missions also furthered commercial contacts between the two countries. In the Mauryan period Indian traders were keen to obtain pearls and other gems from Sri Lanka[24].

One more reference found in the inscription of Polonnaruva states that Shasa Malla was a ruler of Sri Lanka and the dates Sahasa Malla's accession is ascribed to 1473 after the Buddha's nirvana. A coin of Srimad Sahasa Malla was discovered from Manikapatna excavation[25]. It shows there were cultural interaction and trade between Srilanka and Odisha.

Vijayabahu (1070-1110 CE) a king of Simhala, married the Kalingan princess Trilokasundari and the next successor was Parakramabahu I(1153-1186 CE). Finally, Nisanka Malla ruled Sri Lanka from c.1187- 1196 CE was from Kalinga and born at Simhapura. Nisanka Malla from Kalinga had established his capital at Polonnaruva in Simhala. It is within the periods of these three kings covering a time span of 82 years Polonnaruva or Pulasthipura rose up to a great historical city with monasteries and monastic buildings of unprecedented designs and novel features. The inscriptions found from the vast ruins of Polonnaruva settlement testifies the fact that Nissankamalla's contribution towards Buddhism and Buddhist architecture appears to be considerable during his short reign. He is remarkable for setting up the largest number of epigraphs. Nissankamalla inaugurated another phase of building activities by building a temple of Tooth Relic and a Vihara adorned with hundred pasadas .*Pujavaliya* states that he constructed a temple of Tooth (Daladage) in sixty hours[26] (*Pujavaliyam)*.His inscriptions reveal that he was the author of some other religious edifices in Polonnarurva viz, Circular Shrine (Vata-Da-Ge) and Nissankala tamandapaaya. The PolonnaruVata-Da-Ge inscription states that it was built by Lak-Vijaya Singu Senevi Tavurunavan on the orders of King Nissankamalla and named it Ratnagiri[27]. The Preethi Dana Mandapa inscription of Nissankamalla contains the same statement.He was the last king to rule in Polonnaruva to have contributed towards the development of monastic architecture.

With the termination of his reign cease to operate such activities in the city of Polonnaruva.[28] The Polonnaruva with all its monuments and inscriptions are beautifully restored and now is a world heritage site. .It is veritable research center for Odisha. A separate research project is felt necessary to unravel historical linkages.

Gold fanams of eastern Ganga King Anantavarma Chodaganga (1078- 1147) was found in the regions of Kandy are suggestive of commercial relations carried on during this period between the two countries. There was close political relations between the two countries. During the time of political crisis kings of Kalinga used to help the kings of Ceylon. The maritime trade with Ceylon continued up to late medieval period. In India, we have the south-west monsoon from the month of June to September which used to blow from the south-west direction. This wind is favourable for the return of ships / boats from Ceylon to Kalinga. This fact is attested by a series of festivals like the Khudurkuni Osha associated with the return journey of ships. So also we have the north-east monsoon during the months of October to February referred to as retreat monsoon which is quite favorable for ships sailing to Ceylon from any ports of Kalinga. The Sadhavas (marine traders) of Kalinga taking advantage of this favourable wind, which is referred to as µfair wind or fair µwhether winds used to set their sail during these months. This fact could be attested by celebration of the boita bandana ustav on the day of Kartika Purnima (full moon day of Kartika). The further research is underway to know scientifically more about in this aspect. But historical resources with its Buddhist legacy could be used for marketing Odisha in Srilanka and initiatives has already been started by OIMSEAS and Department of Tourism. However, more intensive research is necessary to unfold the historical trivia.

Indonesia

Hinduism and Buddhism arrived very early and deepened their roots in Indonesia.In seventh century CE, both the religions challenged each other. Sumatra was the center of the Buddhist religion while Java was the Hindu Mataram. Majapahit was the famous and strongest empire of Hindu kingdoms there. But thirteenth century came with a change and Muslim forces challenged their legacy and consequently they lost their grip over Java and had to go to Bali and settled there.The first Europeans who arrived in Indonesia were the Portuguese in sixteenth century and grip of Islam weekend. But the Dutch displaced them soon. From the revolt of Javanese prince Diponegoro in 1825 to revolutionary nationalist movement led by Sukarno till 1949 Indonesia had fought one of the longest battles for freedom in the whole world.

An interesting event may be mentioned the role of Biju Patnaik in the freedom movement of Indonesia in the year 1947. Biju Patnaik met with Jawaharlal Nehru during his participation in Indian freedom struggle and became one of his trusted friends. Nehru viewed the freedom struggle of the Indonesian people as parallel to that of India, and viewed Indonesia as a potential ally. When the Dutch attempted to quell Indonesian independence on 21 July 1947, President Sukarno ordered Sjahrir, the former prime minister of Indonesia, to leave the country to attend the first Inter-Asia Conference, organised by Nehru, in July 1947 and to foment international public opinion against the Dutch. Sjahrir was unable to leave as the Dutch controlled the Indonesian sea and air routes. Nehru asked Biju Patnaik, who was adventurous and an expert pilot, to rescue Sjahrir. Biju Patnaik and his wife flew to Java and brought Sultan Sjahrir out on a Dakota reaching India via Singapore on 24 July 1947. For this act of bravery, Patnaik was given honorary citizenship in

Indonesia and awarded the '**Bhoomi Putra**' the highest Indonesian award, rarely granted to a foreigner. In 1996, when Indonesia was celebrating its 50th Independence Day, Biju Patnaik was awarded the highest national award, the '**Bintang Jasa Utama**[29].

Java

The famous king of Java, Jayabhaya (12 century CE.) has written a legend and believed himself to be the descendant of Kalinga family. H B Sarkar writes that that the colonists of this region at the beginning of recorded history (650 CE), came from the Coromandal coast of southern India or from the Hinduised tracts of Western Java where the Pallava script was in vogue several centuries back. Probably there were also some colonists from the Kalinga region of India, as the name Ho-ling, which is deemed to be a Chinese transcription of Kalinga and applicable to Central Java seems to testify.[30] There is a place called Holing in Java. The people of Kalinga were said to have landed there. Scholars are of the opinion that Holing is the Chinese equivalent for Kalinga. Until the rise of 'Imperial Cholas', only Klings or 'Kalingas' were mentioned in Javanese inscriptions as foreign visitors from the eastern coast of India.[31] The inscriptions of nagari character found in Java are similar to the inscriptions of Odisha. The construction of two canals Chandrabhaga and Gomati in Java in 5th century CE are attributed to these migrants. Chinese traveler Fa-Hien who visited Java in 413 CE. mentions that Brahmins and Buddhist monks of Kalingan country frequently travelled to China and the ship in which he went to Canto had hundreds of Hindu traders on board. From the history of Chinese Tsnag dynasty, it is definitely known that a kingdom called Kalinga was in existence in Java. It was due to the effort of Gunavarmana who introduced the Hinayanic form of Buddhism into Java in the early part of 5th century CE. I-tsing remarks that most of



Stupa Borobudur, Indonesia



Stupa, Borobudur

islands including Java (Ho-lin),Malayu or Srivijaya and Borneo,etc., in the south Seas followed the *Mulasarvastivadin* and *Sammitiya* Schools. There was not much of Mahayana Buddhism there except to ascertain extent in Malayu.(Sumatra).

[31][Prof Krom ,Geschiedenis,p.104,says that the term Ho-ling should signify no more than that the Chinese had round there a "Hindu" –land ,because the term "Kaling" is used in a much broader sense than what is derived from Kalinga. He further says ,that the modern parlance in the Archipelago where every Indian ,irrespective of the Hindu-element, also spoke of "Kalinga" in connection with a similar culture in Java, without meaning that the Indians had actually come from Kalinga. Without denying the force of Prof Krom's argument, it may be pointed out that it is not for the first time that the Chinese found a "Hindu-land" in Java, nor is there any proof that the term "Kaling for all Indians" was prevalent[32]. However, the culture of Central Java was similar to that of the Kalingan –people which suggests the presence of Kalinga –element and culture in Hindu-Javanese society of Central Java.

H B Sarkar writes that there were some colonists from Kalinga region of India, as the name Ho-ling which is deemed to be a Chinese transcription of Kalinga and applicable to central Java. The use of Sanskrit language and meter and the elaborate representation of the Hindu religious tradition indicate that there was no dearth of Sanskrit scholars in Central Java from c.650 CE onwards. The Chinese reference to a Javanese scholar from Ho-ling ,Jnanabhdra whom the Chinese call Joh-na-poh-t'o-lo points to the same conclusion. It is stated of the Chinese pilgrim Hwui-ning that he visited Kalinga in 664-5 CE and remained there for three years, translating in collaboration with Jnanabhadra the extracts about nirvana of Buddha from Agama -texts that belonged to the first class of *Hinyanasutras*. After translation of Hwui-ning

was completed ,he dispatched it to China through yun-K'I, a youthful Chinese clergyman, who had received ordination under Jinanabhdra[33].

A group of Brahmins, in a district of Bali are called Brahamana Boudha Kalinga, which may indicate that these Brahmins came from Buddhist Kalinga. In Bali the entire Buddhist village of Boudha Keling is located on the slopes of Bali's highest mountain peak, Gunung Agung. The recent finds of non-local coarse pottery 'Black Ware' and knobbed ware on the coast of Java, Bali and Odishan coasts (Radhanagar) corroborates the presence of a complex network of luxury and subsistence goods which sustained the maritime system.

The legends narrate that twenty thousand families migrated to Java along with the prince of Kalinga in the early medieval period. R Balkrishnan proved that the place name research corroborates a mass scale migration to Java[34] The Jaha inscription of Java mentions the Kling (Kalinga people and its contact with Java. The Buddha figure of Java are very much akin to some of the Buddha images found at Lalitgiri and Ratnagiri. The excavation finding at Tamralipti (WB) Kalingapattna (AP) and Sisupalgarh, Ratnagiri, Radhanagar of Odisha of 3rd century CE also throws light on this aspect. It needs to be documented scientifically.

A Sanskrit inscription of 732 in a Saivite sanctuary at Changgal,south-east of the Borobudur, records the erection of a linga by a king Sanjaya of Mantaram in Kunjarakunja in the island of Java. Another inscription discovered at Chandi Kalasan ,east of Jogjakarta, which commemorates the foundation of the chandi as a shrine to the Buddhist goddess Tara[35].

It is certain that the Sailendras or the kings of mountain of late 8^{th} or early 9^{th} century erected the glorious Buddhist

monuments in Central Java. The Borobudur represents the highest expression of the artistic genius of the Sailendra period. It is not a temple with an interior, but an immense Stupa in the form of stone terraces covering the upper part of a natural hill, on the flattend top of which stand the central Stupa whose height is 150 feet. The walls of the galleries on both sides are adorned with bas -relief, sculptures illustrating Mahayanist texts.They run to thousands. In addition there are four hundred statues of the Buddha. The base has a series of reliefs depicting the effects of good and evil deeds in daily life producing Karma.[36]

From the religious point of view the sanctuary as whole form s an impressive and convincing text book of Buddhism as taught by the Nalanda school.The style of sculpture follows the classic models of Gupta age of India. It seems that some eastern Indian influence particularly of Ratnagiri of Odisha is reflected in these art motifs. The Buddhist monuments of Odisha particularly of Ratnagiri and Udayagiri have some close resemblance with that of art motifs of Borobudur. Recently scholars have opined that the essence of Gupta art is an expression of spiritual harmony so well manifested at Saranath, Ratnagiri and Borobudur[37]

Other outstanding examples of the same period are Chandi Sari, a single Vihara; Chandi Plaosan, consisting of two central square, each with a Vihara, surrounded by a belt of shrine and two belts of stupas; and the unfinished Chandi Sevu, consisting of a large Vihara surrounded by four square belt of 240 small shrines.

Mention may be made here that the Gupta art style matured at Saranath reflect the religious catholism of the Gupta emperors who patronized both the faith. This lead to the introduction of pluralism of style. There remained a very thin line between Brahmanic and Buddhist art. Both blooming

under the canopy of Gupta art. Since then this syncretism remained an everlasting feature of stylistic trends in Indian art and India influence art.The tradition was carried forward by the post –Gupta art centers, i.e, Nalanda,Ratnagiri,Udaygiri etc. and ite ripple effect reached the shores of Southeast Asia. In Java, Buddhism successfully grafted itself over the ritualistic paraphernalia of Brahmanism, already strong rooted in the region.

Buddhist art in Java incorporates deities and motifs derived from Hindu mythology. These include Garuda and Angsa, divine mounts of Vishnu and Brahma; the ancient Vedic god Indra (often called Sakra or Sakka); demi-gods such as *Kala*, lord of time who stole the elixir of immortality, *nagas* or serpent deities, *ganas* (the lord of whom, known as Ganesha, "lord of the ganas", became a significant Hindu deity); mythical beings such as the half-bird, half-human musicians *kinnara* and *kinnari*, *apsaras* (female spirits created during the churning of the elixir of immortality), and *makaras*, the mythical beasts comprising five different animals. The symbolism of mountains as the residences of the gods, and the wish-fulfilling tree as a feature of heaven, can be found in pre-Buddhist belief in India.

D P Ghosh[38] is of the opinion that the art motifs like *Kirtimukha*, *Makara* and Chaitya window niches migrated to Java from Odisha. These art motifs are depicted elaborately in the temples like Vaital, Muktesvara, Lingaraj and other temples. This an area many scholars like R C Mujumdar[39], G Coedes[40] and others held the same view. However, it needs to be investigated thoroughly by the scholars of Odisha.

Sumatra

Sumatra is an Island in Indonesia and the second largest of the greater Sunda Island, in the Malyan Archipelago. It is separated in the north east from the Malaya Peninsula by

strait of Malacca and in the south from Java by the Sunda Strait. Situated on the trade route between India and China, the Indonesian Archaipelago consisting of Islands like Java, Sumatra, Bali etc, had maintained exclusive contact with India. The Chinese sources provide facts about the Sumatran Country .According the source "the country of Kan-t'o-li is situated on an island in the southern sea; its customs and manners are about the same as those of Fou-nan and Lin-yi.It produces cloth of variegated colours, cotton, and areca-nuts, these last being excellent quality and better than those of any other country.

In the reign of the emperor Hio-Wou of the Song dynasty (454-464),the king of the country ,Che-p'o-lo.na-lien-t'o (Srivara-narendra) sent a high official of the name Tichou Liieou-t'o (Rudra,the Indian) to present valuable articles of gold and silver.

Scholars believe that between 414 and first decade of 6th century CE, Buddhism spread through the principle states of Indonesia. And it is at this same period that Buddhism made a decisive progress in China under the Wei and Liang. The sixth century is a great period in the history of the expansion of Indian ideas and of the intercourse by sea between the peoples of Asia[41].

Although many scholars have worked in this aspect still but more work is to be carried out on the Indianisation of Sumatra and role of Odisha or Kalinga.The reference found that Jayanasa of the Sri Vijaya kingdom of south eastern Sumatra based on maritime commerce. He constructed a public park in the capital Palembang and named it as Srikshetra[42]. Since Srikshetra- the puranic name of Puri, is an cultural landscape on the Odishan coast might have some intrusion of cultural impact on Island of Sumatra as that of Hmawza neaer Prome in central Burma or Myanmar.

One more reference may be mentioned that the monk Yijing (I Tsing) left China in 671 bound for Sumatra on a ship belonging to the ruler of Srivijaya. He stayed there for six months studying Sanskrit. From Srivijaya the king sent him to another kingdom called Malayu, where he spent two more months. Next he went to Kedah, where he remained until the wind became favorable for a voyage to India. The monk probably landed in the Odishan coast and thence proceeded to Nalanda by land route. He spent the next 17 years in Nalanda, then took all the texts he had collected, which he stated contained 500,000 *slokas*, and returned to Srivijaya. He strongly advised future Chinese pilgrims to spend one or two years in Srivijaya to "practice the proper rules" before going to India. He himself spent at least four more years in Srivijaya before he returned to China for good. In Sumatra, several other Chinese monks joined him, some spending several years with him[43].

Many scholars believe that the control of Kedah by Srivijaya (695 latest) was mainly intended to control the shipping route from Bay of Bengal to Indonesia, as Kedah was port of call. The maritime navigation as revealed from history of Indonesia as well as the established 'voyage track of ships going out and coming in' on Odishan coast was mostly to Pegu, Siam and to Melaka. The voyage details as recorded in the diary of Martin, a Frnch factor taken as captive reveals that the ships from Java were taking the route through Banka strait, Malcca strait, Kedah, Andaman Island and touch Odisha coast near Sonapur. Touching the Odishan coast near the Mahindra hill had specific navigational advantages.

Bali

Bali is the smallest island province of Indonesia, located on the eastern side of Java and its capital Denpasar. It is separated from Java by Bali Strait. The highest mountain is mount Agung, 3,031 m in height and an active volcano, is responsible for

high quality of fertile land prompting locals to grow rice which is also a staple food for the locals. The island has several coral reefs, several beaches with black sands and the surrounding areas are full of temples. Singaraja is the second largest city of Bali and Kuta is famous for its lovely beach .Ubud, located at the north of Denpasar, is considered as the cultural centre of Bali. Every Balinese considers oneself representing a common culture which is imbibed from mixed Hindu culture that is a veneer of Animisim ,Hinduism and Buddhism. They consider themselves belonging to one of the nine Hindu sects existed in ancient Bali i.e, Pasupata, Bhirava, Siva Sidhanta ,Vaisnava ,Boudha ,Brahma, Resi. Sora and Ganapatya. Starting from worshipping *grmadevata* (the village god) Balinese Hindus are not less practioners than the main land Indians. The main gods –Brahma, Vishnu and Mahesha (the creator, protector and destroyer)-remain on the top besides numerous gods and goddesses of the mountains, seas, the rivers and of the entire individual natural and empirical phenomenon. Bali's local history and its historical connection to overseas regions are uniquely rich due to Hindu integrating Buddha in the world's most popular Muslim country of Indonesia. The historical connection between India and Bali through the ancient seasonal maritime trade seems to be the most significant.

The Hindu way of life and culture which were brought to Indonesia about 2000 years back presumably by Indian travelers amalgamated with the indigenous culture to such an extent that a new hybrid cultural pattern was born. As Indonesians were already having animistic way of life because of their spiritual association with fire, mountains, trees, they accepted this new religion and soon became its ardent practioners.[44]

The rivers of Bali have been named after the rivers of India like Ganga,Sindhu,Yamuna,Sarayu,Narmad,Krishna,Kaveri etc. Balenese recognize that the waters of Indian river is holy and sacred while that of local rivers is not considered so. Their sacramental need has been improvised by a formula by which the waters of local river is rendered sacred by priests by uttering *mantras* in ceremony of *Surya Sevana* after the water has undergone the ceremony of Surya Sevana it become *amruta*. Surya Sevana is also a must for every family which is to conduct itself in accordance with the tenets of Hindu *Grihasutras* .Bali was initiated into Shaivamata directly by Hindu migrants much before it came under the influence of Java. Buddhism entered into Bali in 6th century CE but could not much headway as against puranic Brhamanism instead of confrontation, the two sects have made a theological rapproachement between the two doctrines. The Buddha is regarded as the younger brother of Siva. At the cremation of Princes the consecrated water brought by the Saiva priest is mingled with that brought by the Buddhist priest in the ratio of 2:1[45].

A Bali temple is not very similar to Indian ones; it is different in internal structure and is called pura. The pura originates from the Sanskrit words *–pur,-puri,-pura,-puram,*-pore meaning "city" .The word puri in Sanskrit means "town" ,or "city" and is cognate with polis in Greek. It is possible that Puri is shortened name of Jagannth Puri or Purusottam Puri. In some records to the British rule, the word 'Jagannath' was used for Puri. During the development of Balinese language, the term pura came to refer to a religious temple complex, while the term puri came to refer to place,

Ancient sea voyages are now days remembered and celebrated as social functions in India. For instance, the full moon day (*Kartika Purnima*) of October-November is celebrated

by the people of Odisha as Bali Yatra (Voyage to Bali Island). It is believed that the famous Bali Yatra festival of Odisha is observed every year to commemorate the first voyage of Kalingan people to Bali. From the history of Sailodvava dynasty of Odisha, it is known that king Madhavaraj was banished to Bali along with 20,000 soldiers in 6th century CE He established his kingdom in Bali and later on spread his influence to other territories by conquest and trade activities. It is believed that, since then, large scale seafaring activities to Bali began. Dance forms of Bali have much connection with Mahabharata and Ramayan themes of Odishan origin. Legong dance with Balinese ballet, Ketchak or Monkey dance has much similarity with Odishan tribal dance forms. The famous Ubud paintings on Balinese life reflects echo of Odishan tribal life pattern. While god of the forest seeing through the whistling leaves are excellent and reminiscent of tribal life in hills and dales of Odisha. The Sambalpur tie-and-die and weaving traditions of Odisha have also left imprints in Balinese textile traditions. I.G.P. Phalgunadi a scholar of Bali has observed semblance in food habit, religious practices and vocabulary in Balinese and Odishan life style. The maritime activities declined with the advent of the Mughals and now it has been virtually reduced to an annual ritual of floating small toy boats on Kartika Purnima to evoke the memories of our glorious traditions[46].

Myanmar (Burma)

Myanmar earlier known as Burma is situated in Southeast Asia. Myanmar shares border with China in north,agin with China ,Laos and Thailand in east and Bangladesh and India in the west, with the Bay of Bengal and Andaman Sea in south. The typological feature of the country divides it in two regions as Upper having interior regions and lower comprises of coastal region..The landscape of Myanmar presents formation

to central lowland surrounded by highlands.A horse shaped mountain complex and the valley of the Irrawaddy river system are the dominant topological features. Most of Myanmar lies within the tropical zone and enjoys a monsson climate. Irrawady is the longest river and emerges from confluence of Mali Haka and Nemei rivers in north of Kichin state near Myitkyina, flows towards south and finally forms an extensive delta before merging into Gulf of Mataban.The majority of population lives in Irrawaddy vally.The major religion of the country is Buddhisim sharing 89%, and others being Christian 4%,Muslim 4% and others 3%.[47].The majority of people in Myanmar follow Theravada Buddhism with its orthodox inclination.

The earliest historical evidence touching the land of Burma relates the old overland route between China and West, which crossed the northern region of the country .Burmese Buddhist legends tell Indian influence coming to lower Burma by sea. Scholars like R K Kanchan mentions that the delta of the Irrawadi around Pegu was occupied and colonized by the group formed by the royal Kalinga family in 3rd century BCE after the complete victory of emperor Asoka over Kalinga. The migration from Kalinga was by land as well as sea route. Kalingas, living in lower course of the Ganga on its both banks, took to migration by land route where as those living in the coastal belt of Andhra and Odisha fled away by ship .Meghasthenese ,Bectrian ambassador at the court of Pataliputra, testifies that Kalingas were in habiting both banks of the Ganga in its lower course, as quoted by Arian.[48]The *Buddhagat*, the sacred Burmese scripture,refer to "a steady commercial interaction with Burma by the Buddhist merchants of Kalinga, which soon led to the missionary undertakings for the propagation of their religion, and after wards to the assumption of political supremacy in the land[49]. Besides, the

episode of Tapussa and Bhallika –the first lay disciples of the Budhha is very active in annals of history of Burma and Utkala.

In the *Jatakas* the region is referred to as Subarnabhumi,the Golden Land. A favorite Burmese story is of the two brothers ,Tapusa and Palikat, who are said to have been given eight hairs of his head by Gautama. These they brought by sea to the Golden land and enshrined under the Shwe Dagon Pagoda, which adorn modern Rangoon. The Moon chronicles contain a legend which tells how Sona and Uttara, two Buddhist monks were deputed to the Golden land by the Third Buddhist Synod at Pataliputra in c.241 BCE[50].

The Burmese Glass Palace Chronicle (Hamannan Yazawin), first compiled in 1829 links Burmas foundation with the Tagaung dynasty. The Chinese pilgrims Huen Tsang and I Tsing mentioned Srikshetra as Pyu capital. Legends of the Pyu come from the area northwards from it to Halin in Shwebo district. Inscriptions found at both places are said to be of the seventh century. Inscriptions have also been found with the name of Varmana dynasty but where it reigned is not indicated[51].

However, the archaeological investigation by U Aung Thaw of Archaeological Department explains (1966) that later evidences of carbon tests of Pyu three city sites Beikthanomyo, Halin and Srikshetra show them to have been in existence as early as the first century CE.

Srikshetra was a very rich city ,and the excavations there have yielded traces of a massive city wall embracing an area larger than that of Pagan or Mandalay with impressive moat.The importance of the city is shown by the fact that Mon inscriptions as late as Kyanzittha's reign (1084-1112 CE) still referred to as capital. Close to it are three large Buddhist

stupas, one 150 feet high. It has also a number of small vaulted chapels ,which are prototypes of the later Pagan temples. There are large stone sculptures in relief in Gupta style, small images in the round, silver coins,probably symbolical ,with curious designs of the sun, moon and stars and terracotta votive plaques with Sanskrit legends in Nagari charater. There are numerous stone sculpture of Vishnu ,bronze statuettes of Avalokitesvara and other Mahayanist Boddhisattvas, besides statuary and Pali inscriptions showing Hinayana Buddhism flourished there from an early date. The dead were burnt and their ashes stored in urns within pagoda precincts ,or in extensive cemeteries on brick platforms covered with earth.Mention has been made earlier of the Chandra dynasty of Vaisali,the first Arkanese rulers to be attested by epigraphy.The same source shows a second dynasty ,founded in eighth century by Sri Dharmavijaya,whose grandson is said to have married a daughter of a Pyu king of Srikshetra. This evidence of Pyu –Arkanese relations explains the presence in Srikshetra of Mahayan Buddhism of the type under Pala dynasty of Bengal and Bhaumakaras of Odisha. The Pyu state's Theravada Buddhism though Mon provenance, was more syncretic than that of Dvaravati, with not only Brahamanic Hinduism in evidence but also naga-worship and animism. A gold leaf manuscript contains extracts from Vinaya and Abhidhamma of c.6th-7th CE was discovered at Hmawza near Prome in Myanmar.[52]

During the rule of Nanchao in 8th-9th centuries opened the old road to India across Upper Burma. There are signs that northern Burma in this period saw much development. Contemporary writers refer to the production of gold, amber, salt horses, long-horned cattle, elephants for plaughing and much else.

From the middle of 11th century , another 'imperial kingdom' an important competitor arose in the northeastern Bay of Bengal. The kingdom of Pagan united central and coastal Burma with parts of the northwestern coast of the Malay Peninsula.Pagan was thus, perhaps for the first time in the history of Southeast Asia, able to link maritime trade in the northern Bay of Bengal directly with China, through its access to the land route to Yunnan. During this period Burma's relations with countries on the opposite side of the Bay of Bengal and with Sri Lanka appear to have been very strong as can be seen for example, from the influence of Odishan architecture in early Pagan.

Funan or Kambuja (Cambodia)

Cambodia, a country in mainland Southeast Asia, first appear in Chinese annals in reference to Funan, a polity that encompassed the southernmost part of the Indochinese peninsula during the 1st to 6th centuries. Centered at the lower Mekong, Funan is noted as the oldest regional Hindu culture, which suggests prolonged socio-economic interaction with maritime trading partners of the Indosphere in the west.

Indian culture was introduced in early centuries of Common Era and continued in full vigour for more than thousand years in the kingdoms of Funan, Chenla and Kambuja. According to the Chinese sources the kingdom of Funan was established by brahamana Kaundinya –I, at the close of 1st century CE. His capital was at Vyadhapura. Process of Indiniasatin began.It was further accelerated with the arrival of another brahamna Kaundinya-II in later part of 4th century CE. One of the greatest King of Funan was Jayavarman (484-514 CE). Scholars believe that people of Kaling took a major part in carving out the king dom of Funan. In Odishan context Kaundinya Brahmins who still continue to live near Mahendra Mountain region. Historically , the Mahendra region was an



Angkor-wat, Cambodia

important part of the dynasties like Mathars, Eastern Gangas and Sailodbhava in the early centuries of Common Era. There are a few Saiva and Viasnava temple of 5th-6th centuries on the top of Mahendra mountain and around.On the basis of these evidences on can infer that the Kaundinya Brahmanas might have migrated through the Port of Palur which was referred by Ptolemy 2nd century CE. The name of Mahendra mountain appears in the history of Funnan in two occasions. The history of southern Ch'I states that during the reign of Jayavarmana (5th century C.E.) the custom of this country was to worship the God Mahesvara (Shiva) who continually descends on mount Mo-tan. Mo-tan could be another name of Mahendra mountain of Odisha which was also considered as abode of Shiva since the Eastern Gangas of Kalinga were worshipping Shiva Gokarnasvami as the tutelary deity on Mahendra mountain. According to a Chinese tradition, there were more than 1,000 Brahmins in Tuan Siuan, a principality under Fu-nan. The Kambuja records mention a number of brahamans who came from India. A Brahmin Hiranyadama

came from a Janapada in India to teach Tantric texts to Sivakaivalya,the royal prist.[53]. After that a brahmin named Agastya came here and married a princess named Yasomati. Harsikesa (Brahma) of the Bharadvaja gotra came to Kambujadesa from Narapatidesa (Brahma) and was Royal Purohit of Emperor Jayavarmana VII. He married the daughter of a person at Berhampura, and had by her four sons and two daughters. The elder of the two daughters became the queen of Jayavarmana VIII. .A Brahmin named Vamasiva was the preceptor of Indravarmana. The archaeological evidences are still available. God Shiva was worshipped in Phunan by different names such as Mahesvara and Tribhuvanesvara[54]. However, more serious research is need of the day.

By the beginning of the 7th century CE all of Cambodia was highly civilized. At first Cambodia was divided into rival states. However, at the beginning of the 9th century a king named Jayavarman II founded the Khmer Empire in Cambodia with the capital city named as Indrapura which has been identified with the archaeological site Banteay Prei Nokor on lower Mekong.. There he took the service of a Brahmin, Siva Kaivalya who became the first priest of the new cult Devaraja, the God king, a form of Saivism. This form of Saivism was centered round on the worship of the Lingam. It was a belief that the prosperity if a kingdom was considered to be bound of with the welfare of the royal lingam. Its sanctuary was at the summit of a temple mountain. This conception of a temple mountain perhaps travelled from ancient India. From his time onwards, for several centuries, it was the duty of every Khmer king to raise his temple mountain for the preservation of the royal lingam. Thus there arose the great temple which was the glory of Angkor region. The second capital he planted at Hariharalaya, 'the abode of Harihara', southeast of modern Siemreap and again he founded a third capital named

Amarendrapura. Finally he moved to Phnomkulen in the Kulen hills, some 30 miles northeast of Angkor where he built Mahendra Parvata. After Jayavarman II as many as 37 rulers came to power one after another till the fall of Angkor in 1432 CE. Among these rulers Indravarmana I,Yosvarman I,Rajendravarman II,Suryavarman II, and Jaya varman VII were most powerful.

Suryavarman II (1113 - 1150), one of the greatest Angkorian monarchs, expanded his kingdom's territory in a series of successful wars against the kingdom of Champa in central Vietnam and the small Mon polities as far west as the Irrawaddy River of Burma. He reduced to vassalage the Thai peoples who had migrated into Southeast Asia from the Yunnan region of southern China and established his suzerainty over the northern part of the Malay Peninsula. His greatest achievement was the construction of the temple city complex of Angkor Wat. The largest religious edifice in the world, Angkor Wat is considered the greatest single architectural work in Southeast Asia.

Angkor Wat lies 5.5 kilometres north of the modern town of Siem Reap, and a short distance south and slightly east of the previous capital, which was centered at Baphuon. In an area of Cambodia where there is an important group of ancient structures, it is the southernmost of Angkor's main sites.

According to legend, the construction of Angkor Wat was ordered by Indra to act as a palace for his son Precha Ket Mealea. According to the 13th century Chinese traveler Daguan Zhou, it was believed by some that the temple was constructed in a single night by a divine architect.

The initial design and construction of the temple took place in the first half of the 12th century, during the reign of Suryavarman II (ruled 1113 – c. 1150 CE). Dedicated to Vishnu,

it was built as the king's state temple and capital city. As neither the foundation stela nor any contemporary inscriptions referring to the temple have been found, its original name is unknown, but it may have been known as "Varah Vishnu-lok" after the presiding deity. Work seems to have ended shortly after the king's death, leaving some of the bas-relief decoration unfinished. In 1177 CE, approximately 27 years after the death of Suryavarman II, Angkor was sacked by the Chams, the traditional enemies of the Khmer. Thereafter the empire was restored by a new king, Jayavarman VII, who established a new capital and state temple (Angkor Thom and the Bayon respectively) a few kilometers to the north.

Toward the end of the 12th century, Angkor Wat gradually transformed from a Hindu center of worship to Buddhism, which continues to the present day. Angkor Wat is unusual among the Angkor temples in that although it was somewhat neglected after the 16th century it was never completely abandoned, its preservation being due in part to the fact that its moat also provided some protection from encroachment by the jungle.

One of the first Western visitors to the temple was *António da Madalena*, a Portuguese monk who visited in 1586 and said that it "is of such extraordinary construction that it is not possible to describe it with a pen, particularly since it is like no other building in the world. It has towers and decoration and all the refinements which the human genius can conceive of."

By the 17th century, Angkor Wat was not completely abandoned and functioned as a Buddhist temple. Fourteen inscriptions dated from the 17th century discovered in Angkor area, testify to Japanese Buddhist pilgrims that might had established small settlements alongside Khmer locals. At that time, the temple was thought by the Japanese visitors as the

famed Jetavana garden of the Buddha, which originally located in the kingdom of Magadha, India.The best-known inscription tells of Ukondafu Kazufusa, who celebrated the Khmer New Year at Angkor Wat in 1632[55]

In the mid-19th century, the temple was visited by the French naturalist and explorer, Henri Mouhot, who popularized the site in the West through the publication of travel notes, in which he wrote:

"One of these temples—a rival to that of Solomon, and erected by some ancient Michelangelo—might take an honorable place beside our most beautiful buildings. It is grander than anything left to us by Greece or Rome, and presents a sad contrast to the state of barbarism in which the nation is now plunged."

Many Brahmins and business people were coming from India. Sanskrit was the language of the State intelligentia. In State Records highest class of Sanskrit poetic language is found. Many scriptures written in Sanskrit like Philosophy, Vedas, Puranas, Ramayana, Mahabharata and the works Written by Panini, Patanjali, Manu, Vatsyayan, Kalidas Etc., were being studied thoroughly. Governing Body of Kambuj State was totally based on structure like India.

Scholars believe that the concept of Devaraj[56] cult which is very popular in Cambodia might have migrated from India and that of Odisha. The living rituals of Bhubaneswar and Puri as Chalanti Pratima could have with close interaction between the two regions. Again after 12th century CE the cult of Vishnu was developed both the regions of course with the construction of Jagannat temple and the elaborate ritual of Vishnu including *Pacaratra* ritual again got its similarity in both the regions. The sculptural panels at Angokar Wat and the Ganga monuments of Odisha has some similarities.

However, it need intensive comparative survey to say something definitely. But it is certain that there were constant trans-oceanic contact with the people of both the regions.

Thailand

India and Thailand, located in each others extended neighbourhood, share unique civilizational links going back several millennia. Hindu elements could be traced among those reflected in Thai architecture, arts, sculpture, dance, drama and literature. The Thai language incorporates Pali and Sanskrit influences. A large Indian Diaspora living and working in Thailand is another important bond.

Thailand with an area of 380,400 square miles is situated between 6^{0}-$21^{'}$ N latitude 97^{0}-$196^{'}$ E longitude. The original name of Thailand was Siam which was changed in June 1939..Several annals ,Sanskrit literature and Chronicles of Sri Lanka refer to it. Thailand means 'Land of free people' and this title justified because Thailand is the only Southeast Asian country that never became a colony of an European power. Thailand is surrounded by the Gulf of Siam on one side and Kampuchea (Camboj or Cambodia), Laos, Myanmar (Burma) and Malay on its other side. The Salween river divides Thailand from Myanmar and the Mekong river exists as a dividing line between eastern Thailand and Laos. The country is divided into four main geographic regions.

The north, where several important rivers originate, is criss-cross by teak-covered mountains and fertile valleys. The country's highest point, Inthamon Peak, is located in this area. The most heavily populated region is the alluvial central plain, where the country's commerce. Industry and farming activities are mainly concentrated. A vast complex of canals and irrigation projects fed by the Chao Phraya river system, waters the land. North eastern Thailand, the third region, consists of



Terracotta lion Radhanagar

a sandy, dry plateau that generally cannot retain sufficient water for irrigation. The heavily forested south,a 750 kilometers portion of the Malay peninsula , contains much of Thailand's mineral wealth

The roots of civilization in Thailand were firmly anchored in the pre-historic past, but were nourished by contact with exotic societies. It is known that the iron age in Central and Northeast Thailand involved large settlements within which certain individuals were interred with impressive wealth. These were the people who encountered a new range of goods and ideas as Indian traders reached the shores of Southeast Asia. In the India of the day, Southeast Asia was described as the land of gold (Suvarnavumi). Thailand was source for artifacts of high-tin bronze, an alloy which looks like gold because of its yellow colour during late 1st century B.C. Monochrome beads including the opaque browny red mutisalah varieties have been found in many late prehistoric sites of Thailand such as Ban Chiang, Ba Na Di, Non Muang, Ban Don Ta Phet and Kok Ra Ka and the very similar were reported from Rajghat, Taxila, Arikamedu of India. Bringing with them trade goods, jewellery of agate, carnelian and glass, and keenly interested in acquiring spices, aromatic wood and gold. Indians provided local leaders with the opportunity of cornering a new source of valuables .They also provided an outlet for increased local production. The trade contact was very much active in the Bay of Bengal. Number of iron implements and bronze materials, spindle whorls, glass beads were found from the excavation materials of Ban Ta Phet (1980-85). Scholars are of

opinion that the location of Ban Don Ta Phet would have facilitated its participation in trade, for it lies at the Thai gateway to India. In an excavation at Don Ta Phet among others, there is one large and a small broken fragment of another, carnelian pendent carved in the form of a leaping lion which is almost certainly Indian origin [57]. A similar lion terracotta figurine from the post Mauryan and pre Kushan level was recovered from the excavations at Radhanagar which has foreign influence. Before representation in human form was acceptable (a tradition which developed only from first century A.D), Buddha was often shown by one of his attributes such as the foot-print, the Umbrella of royalty, the empty throne or the lotus, bull, elephant to recall the circumstances of his conception and birth, or as a deer to remind devotees of the sermon in the deer park at Saranath[58] However, a particularly common representation was of Buddha as a lion, a reference to him as Sakyasimha, or lion of the Sakya clan and it is highly probable that the lion head from Don Ta Phet, as well as the others are early Buddhist icons and as such probably the earliest witness to Buddhist ideas and values yet recognised in Southeast Asia. Subsequently, the wave of Buddhism was influenced and retained in Thailand of course migrated from India and Sri Lanka.

Archaeological finds show that Buddhism first reached Thailand when it was inhabited by Mon-Khmer, whose capital, Dvaravati,(now called Nakon Pathom or in Sanskrit Nagara Prathama) was about fifty kilometres to the west of Bangkok.There was a vast Pagoda which was called Phra Pathom Chedi (Pathama Cetiya). Scholars say that Buddhism was brought to Thailand by missionaries of the Emperor Asoka, two of whom the theras Sona and Uttara who went to Suvarnabhumi (the Land of Gold).The first form of Buddhism to reach Thailand was that of Theravada and this is borne

out by many historical remains found at Nakon Pathom.Among these were rock inscriptions in Pali,the Buddha footprints and seats and Dharma-Chakra or wheel of Law. All these existed in India before images of the Buddha were introduced around First century BCE/CE. It is evident that Buddhism reached Thailand in 3rd century BCE in more or less the same form as that propagated by Asoka[59]. Many Buddha images were found in Nakon Pathom's ruins and in other cities and on looking at their style, it can be assumed that early missionaries went there from Magadha and Kalinga. The great Stupa (Phra Pathom Chedi) can be compared with Indian Stupas like Sanchi. Thus Indian culture with language and religion gradually started to spread to South-East Asia.

Mahayana Buddhism was also spreading and it flourished in Northern India under king Kaniska in the second half of first century CE, notably and went to Sumatra, Java and Kambuja (Cambodia). Possibly it went through Magadha/ Kalinga region to Burma and Pegu (Lower Burma) and to West Thailand as well as Malaya.

Today, in Southern Thailand, there is much evidence showing that Mahayana Buddhism was established there and the ceityasin Chaiya (Jaya) and Nakon Sri Thammarath (Nagara Sri Dharmaraj) indicates this. Many other stupas and cetiyas were found in Java and Sumatra. Some scholars think that as Mahayana Buddhism had spread to China by the beginning of the Christian Era, the Thais in their original home (in China) may have already come into contact with it there. From 1002 to 1182 AD, in Cambodia there ruled the Suryavarmana dynasty of kings who were Mahayana Buddhists and also propagated this with a strong admixture of Brahminism. A rock inscription tells of a king in Nikon Sri Thammarath in around 1078 CE, who traced his ancestry back to the Srivijaya rulers and this inscription is now in the

National Museum at Bangkok. He ruled at Lodhapuri in central Thailand and his son became king of Cambodia.[60]

Trade with Southeast Asia was established by the 1st century CE, and may have much earlier origins. Later findings include 12th century Ceylonese coins and 14th century Chinese coins. Similar coins from Kotchina in Sumatra point to a triangular trade between Kalinga (Odisha), Ceylon and Sumatra. Trading was not without risks. The kings of Kalinga, Siam and Java had to periodically mount expeditions to put down Malay and Bugis pirates operating in the Strait of Malacca and throughout Maritime Southeast Asia.

Arabian sailors began to intrude into the Bay of Bengal as early as the 8th century, and later Portuguese, Dutch, English and French ships became dominant, reducing the sailors of Odisha to the coastal trade. In 1586, the Muslim ruler of Bengal, Sulaiman Khan Karrani succeeded in conquering the land, ending its independence. Odisha was subsequently ceded to the Marathas in 1751, and came under British rule during the Second Anglo-Maratha War (1803±1805). Odisha lost much of her maritime trade during the British period (1803, 1947). Mahfuz Bandar, the port of Srikakulam, on the Vamsadhara River was constantly frequented by boats coming from the sea and in 1711 in the Ganjam River, there were three masted vessels grounded on the beach.

Although, scholars have taken up research work in this field, more micro studies is the need of the day to document the varied and vast evidences available in the coastal area of Southeast Asian countries as well as riverine hinterland of Odisha. Some work (2011-14) in this direction is being undertaken by the Odishan Institute of Maritime and Southeast Asian Studies. The study resulted that from Tamluk on Rupnarayan River (WB) to Kalingapatna on Vamsdhara River (AP) have as many as 50 Buddhist sites/early historical sites

that have been documented and has given resources that could unravel a new era in the historical research of Eastern India, more precisely in the Odishan history and Culture.

To recapitulate, the trans-oceanic interactions, it is seen that the coast of Bengal and ports of Odisha were humming with trade and cultural contains and interlinked with ancient land routes as well staring to north west reaching the plains of the Ganga. The long south east coast and convenient for anchorage has not only been a transmitter of brisk overseas trade but of religions too. The merchants of Kalinga sailed along with sailors from Tamilnadu and Kerala to South East Asian countries. The mariners took their voyage to Malaya peninsula through straits of Malacca to Sumatra, Java, Bali Borneo through the Sunda straits to Champa and Kamboja from east coast of India. The sailors of Kalinga had landed at various places including Srikhetra in Burma, Takkola, Kokkonagara in Malaya peninsula, Sri- Vijay in Sumatra, Purva Kalinga in Java, Tonking in Combodia etc. The religious preachers as discussed travelled in merchant vessels to preach Buddhism in Southeast Asian countries.

Buddhism and Buddhist monuments of Odisha were the outcome of the brisk trade activities as we have discussed in South East Asian context and now become a major source for Odishan History, Culture and promotion of Tourism. Tourism is the only medium which can ventilate the application of our cultural past or applied history through its various mediums like promotion through leisure packages, destination target which has bondage, as we have discussed and showcase the cultural milieu as well as provide employability and economic boom. The need of the day is that packaging and popularising of our cultural resources that include temples, Buddhist sites, maritime heritage sites, historical landscapes together with fairs and festivals that offer uniqueness in every respect.

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6

BOAT BUILDING TRADITION

The intimacy of Man and Sea is known as far dawn of civilization. Sea as a resource for food gathering is known to the mankind since the dawn of Civilization. With the march of time and growth of knowledge people try to exploit the natural resources available around.It is well attested with the Paleolithic, Neolithic, and Historical periods. It is believed that during the pre-historic period when the sea level was lower, people employed floats or rafts for water crossings and gradually different types of traditional boats were constructed and used for maritime trade, fishing, warfare etc.

The beginnings of boat building technology in India goes back to the Third Millennium BCE, to the Harappan times. The Harappans (or Indus Civilization) constructed the first tide dock of the world for berthing and servicing ships at the port town of Lothal[1] (Rao, 1987). The discovery of the Lothal port and dock in 1955 highlighted the maritime aspects of the Indus Civilization. At Lothal a trapezoid reservoir measuring on an average 214 x 36 meters has been excavated, and has been identified as a dockyard. It is riveted on all four sides

with continuous dry masonry burnt-brick walls, 4- courses wide, which at its greatest extant depth reaches to 3 meter but might have been originally much higher. The structure was stratigraphically connected to the old riverbed of Sabarmati. Towards the southern end there is a broad and relatively shallow gap. This has been supposed to be the inlet channel of the dock. Leading from the southern wall is a narrow brick water passage, said to have functioned as a spill channel, when fitted with a sluice-gate. According to S.R.Rao, the dock has been used in two stages, at the first stage it was designed to allow ships 18-20 meters long and 4-6 meters wide. At least two ships could simultaneously pass and enter easily. In the second stage, the inlet channel was narrowed to accommodate large ships but only single ships with flat bottoms could enter. The terracotta models of a boat from Lothal and engravings on Indus seals give some idea of ships going to the sea. Lothal, with its large market and a busy dock, was a great emporium where goods from neighboring towns and villages, such as Rangpur, Kath etc. were sold in exchange for imported and locally manufactured ones. Lothal had developed overseas trade with the West Coast of India on the one hand and the Mesopotamian cities through the Bahrain islands on the other. Among the manufacturing industries of Lothal bead making, ivory and shell working and bronze-smithy were very important. For the land transport they used bullock carts and pack animals for long distance trade. For inland waterways, flat-bottomed boats of the type suggested by the terracotta models were used. In this connection it may be noted that even today flat-bottomed boats made of reeds are used for carrying men and light goods. Perhaps the Harappans used similar boats in the lakes and rivers also. Trade on the high seas and along the coast was possible because the ships were fitted with sails[2]. This has been referred as it is the first reference on boats, ships and port in India.

Harappans not only built a unique dock but also provided facilities for handling cargo. There were other smaller ports such as Bhagatrav, Sutkagendor and Sutkakah, and perhaps a large one at Dholavira, all in Gujarat. An engraving on a seal from Mohenjodaro represents a sailing ship with a high prow; the stern was made of reeds. In the center, it had a square cabin. Out of five miniature clay models of boats one is complete and represents a ship with sail. The latter has a sharp keel, a pointed prow and a high flat stern. Two blind holes are also visible. One of them seen near the stern was meant for the mast, and the other on the edge of the ship may be for steering. In the second model, which is rather damaged, the stern and the prow were both curved high up as in the Egyptian boats of the Garzean period. The keel is pointed and the margins are raised. A hole made a little away from the center was meant for the mast. In this case, the prow was broken. Three other damaged models found at Lothal have a flat base and a pointed prow, but the keel is not pointed nor is there any hole for fixing the mast. Apparently, these flat-based craft were used on rivers and creeks without sail, while the other two types with sail and sharp keels plied on the high seas and were berthed in the deep waters of the Gulf. Probably the canoe types of flat-based boats were the only ones, which could be sluiced at high tide. Another type of boat can be reconstructed from the paintings on two potsherds. It represents a boat with multiple oars. The Harappan ship must have been as big as the modern country crafts, which bring timber from Malabar to Gogha. On this analogy it can be assumed that a load up to 60 tons could be carried by these ships. The sizes of the anchor stones found in the Lothal dock also support this view [3]

The Periplus of the Erythrean Sea (c.60-100 CE) mentions crafts made of logs with plank sides, outriggers, two canoes joined together and masula boats along the Coromandel

Coast[4].(Schoff, 1911,MLBD2011:243-44).Pliny (c.23-79 CE) mentions that log boats of India used even today in peninsular India suggested that the earliest depiction of planked craft is represented on the eastern gateway of the Sanchi Stupa which dated 2nd century BCE. Except for this as scholars opine, no evidence for Sewn planked boats is available until the early 16th century CE. However, Duarte Barbosa (c.1480-1521 CE) mentions that sewn boats voyaged from the Malbar Coast to the Red Sea. Gasparo Balbi mentions some sewn boats of the Coromandel coast used in surf zone for carrying merchandise and passengers from the mother boats to and from the shore[5].

It is a recorded fact that Pushyadeva, the ruler of Sindh (now in Pakistan) pushed back the formidable Arab navy attacks in 756 CE, which only indicates his marine prowess. The historical text *Yuktikalpataru* (11th century CE) deals with shipbuilding and gives details of various types of ships. Boats used for different purposes were called by different names such as *Samanya, Madhyama* and *Visesha* for passenger service, cargo, fishing and ferrying over the river. The earliest reference to maritime activities in India occurs in *Rigveda*, "Do thou whose countenance is turned to all side send off our adversaries, as if in a ship to the opposite shore: do thou convey us in a ship across the sea for our welfare" (*Rigveda*, 1, 97, 7 and 8).

The boat builders and ships have been described in the pre-historic rock art to the medieval temple architecture of India. Abundant evidence of ship building, navigation and maritime history is available from the Early Historic period onwards, The depiction of boats in the Mohenjo-Daro steatite seal, Terracotta seals of Chandraketugarh, Ajanta Painting, Vasithaputra Pulamavi's coin, temple walls, caves and rock painting are a few examples of the evidences of boat building tradition suggests that these were used for maritime trade,

warfare, fishing and ferrying in rivers, lakes and seas in different point of time.

One of the major reason of Mauryan Emperor Asoka's invasion of Kalinga because of the glorious maritime activities. At that time two major port cities Kalingapatanam/ Dantapura and Tamralipti be in command of Kalingan people. The above fact clearly indicates the traditional boat building activities in Odisha during 3rd century BCE. Prior to that the earliest depiction of a boat in Odisha found in the rock art at Naraj on the confluence of river Mahanadi and Kathajodi.(OIMSEAS) Later on, in the early temples of Odisha depiction of boat bring to notice in the temple panel discovered from Bhaskaresawr temple complex, (elephant transportation) at present kept in Archaeology Gallery of Odessa State Museum. In the right half of east façade of the refectory of the Jagannatha Temple, Puri depiction of traditional boat also been noticed. Boats are also depicted in the sculptures like Martanda Bhairav in Konark temple, Astamahabhaya Tara, Ratnagiri in the early medieval period. The celebration of Bali yatra during the month of Kartika to mark the day when ancient Sadhabas would set sail to distant lands of Bali, as well as Java, Sumatra, Borneo (all in Indonesia), and Sri Lanka for trade and cultural expansion. From the recent excavations at Kankia-Radhanagar, Sisupalgarh, Manikapatana etc large numbers of foreign associate objects like roman bullae, roulette pottery, knobbed ware, caltrop, Indonesian terracotta, Ceylonese coin, Chinese coin, Kharosthi inscription, Chinese porcelain etc clearly indicates glorious far seas trade activities of ancient Odisha during the early historical period. The discovery of large numbers of terracotta net sinkers and stone anchors from Manikapatana excavations also proves the fishing activities in the early Christian era. Later on in the late medieval period traditional boat motifs are noticed in the palm leaf manuscripts. The best example is illustrated

Jayadeva's *Gita Govinda* and *Ushavilash* now preserved in the Manuscript section of Odisha State Museum. OIMSEAS also collected few palm leaf manuscripts regarding the traditional boat building technique in medieval Odisha. These are *Ratnakara Vihara Vilasa, Arnava Vihara Vilasa, Kosali Nauka* etc. The far sea trade activity certainly responsible for the traditional boat building, which is till continued in some selected pockets of Odisha. In Odiya literary works like *Kaibarta Gita, Labanyavati, Parimala, Khulanasundari, Prastabsindhu* etc descriptions on the use of Boats are found.

Technology

The technology of boat building was a hereditary profession passing from generation to generation and was a monopoly of a particular community. The local builders used the hand, fingers and feet as the units of measurements. In different places, different kinds of boats were built for specific purposes. There were two groups of vessels, namely river-going and sea-going.Each had various sub-type as per dimension capacity and height. The river-going vessels were mostly oval at the base, smaller in size, require less draught for easy movement and were fast moving. Whereas sea-going vessels were bigger in size with sharp cutting on both sides, strongly built and technically suited for operating during high tides against currents and strong winds. In any coastal environment, the nature of sea craft depended on physical characteristics of the coastline and on the traditional knowledge of the associated seafaring communities. Along the Indian coast various types of traditional crafts were recorded depending on seabed features, depth, flow of current and wind direction. For several centuries the structure and design of traditional crafts seem to have remained the same with some minor changes. In fact technical details of ships and boatbuilding from the construction to the navigation stage, are few and far between[6]

These boats may bear some similarity in material, techniques or in shape and size. For the construction of ship, the teak (*Tectona grandis*) wood is generally employed in India, though the selection of wood depends upon the nature and type of craft.

The traditional construction of a boat starts with the laying of a **Keel** (keel is foundation beam for the boat and ship), a massive piece of wood supported on a branching stern about a foot above the ground at both ends. This is stepped to take the stern-post (rearmost part of a ship or boat) and also the stem post (the pointed front part of a ship or boat), all made of massive pieces of timber. The keel is laid first and later the planks or ribs are attached. Usually for the keel and stern one single piece of wood is always preferred. The planks are then fastened horizontally on either side of the keel. The planks join edge to edge. **Rudder** is a flat broad piece of wood, which is mainly used for getting a forwards lead to the expected direction and is not seen in all traditional crafts. In some crafts the rudder is replaced by a paddle or oars, which function as a rudder. **Paddle** is a short oar with a broad blade at one or both ends and oar is a pole with a flat blade used in rowing. These are necessary for a straight and swift movement of the vessels. Generally all the ships use the wind power. In the ship the mast is fixed on ribs above the keel. The mast is made out of a timber tree but the builders prefer a bamboo piece, because of its suitability to make a mast long, and strong. **Sail** is a sheet of canvas spread to catch the wind and move a boat or ship forwards. It is used in traditional vessels; the shape of sail is triangular to make it easy to catch the wind. Sails are fixed to the mast with ropes. The sails are used mainly when the vessels are going to the mid sea, so that they can make use of the maximum wind energy.

Traditional Boat-building in various states of India

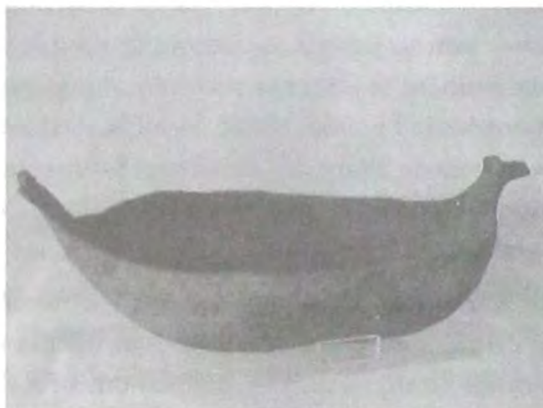
In India, there are various places that have the traditional boats and boat building technology. The Andhara coast is known for 4 types of traditional boats constructed for cargo transport, fishing and ferrying purposes, which are catamarans (teppa), dugout canoe, stitched-planks-built boats and nailed-planks-built boats. Generally the types of wood used for boat building in Andhra Pradesh are grannari karra (*Egesa: Acquicia canilotica*), arcini karra (*Melia dubia*), cinntha karra (*Albizzia* sp.), rai karra, teak, circini karra (*Anogeissus* sp.), mamidi karra (Mango: *Magnifera indica*), sal (*Shorea robusta*), Indian laural (*Terminalia tormentosa*) and maddi (*Alianthus malabarica*). Teppas are simple floating devices, but are the predominant traditional sea craft along the Andhra Pradesh. Some keeled planked boats locally called *padavas* are also common vessels along the Andhra coastline. In Andhra these traditional boats are constructed at Nellare, Prakaram, Godavari and Guntur districts[7].

Boats in Karnataka region are called by different names depending on their use. The smallest craft of this region is known as canoe (*hudi*), which is scooped out of a singletree trunk. The middle-sized craft is known as boat (*doni*) and the biggest craft is known as ship (*machchwa*). Most ships use wind power. The art of shipbuilding is a monopoly of a class of people known as *mestas* or *acharis* (carpenter). The type of wood used for shipbuilding is known as *kshatriya*, which is mentioned in *Yuktikalpataru*. The common wood used for shipbuilding is matthi, sagouy, teak, honne, undi and hebbals. Teakwood is used rarely because of its high coast[8].

Raft, dugout and plank built boats are the main traditional types in the Kerala coast. Raft is made of a number of roughly shaped logs fastened together in order to float down a river or to serve as a boat. Dugout is single log craft, which is scooped



Terracotta Boat Motif, Chandraketugarh



Boat, Tamluk Museum



Boat Motif Tamluk Museum

out in the middle. It is employed all over Kerala for catching fish. Planked built boats are further classified into 2 categories: one is stitched and the second is built with nailed planks. Stitched-planked built craft is manufactured by using coir and synthetic ropes. Generally, the types of wood used for shipbuilding in Kerala are alpassi, mullumurukku or panniclavu (*Ceiba pentandra*), perumaram/alanta (*Alianthus excelsa*), pilivaka (*Albizzia falcatria*), malamurukku (*Samanea saman*), pilavu (*Artocarpus integrifolias*), mavu (*Magnifera indica*), ayini/annili (*Artocarpus hirsuta*), punna (*Callophyllum inophyllum*) and cadacci (*Grewia tiliaefolia*). The bending process is purely based on traditional method by applying a kind of fish oil or cow dung on the planks[9].

The boat builders and ships have been depicted in the brick temple in the district of Midnapore, Birbhum and Bankura in Bengal. The vessels are classified as raft, dugouts and cargo carriers and are used for commercial purpose. Dinghy is a one-man passenger boat in Bengal. It is unique for its features and movement in the river. The boatman squats at paddling on the low sharp stem to maneuver in the zigzag path of the river. A neat cabin with semicircular roof occupies the space available in the middle of the boats. A tall bamboo mast is generally used for long distance travel. In Bengal, small boat is never used except as cargo carriers. The steering paddle is the most remarkable feature of the cargo carriers (*Malbahi nauka*).[10]

Now a days, in Bombay there are no boat building yards to be found in or around, except may be at Varai and Versova. Available wild woods are commonly used for construction of boats and ships. They are not very expensive. The main types of wood that are utilized today are sal, babul, ain, bibla, jambul and punnai, but the teak wood is always the best for ship and boat building and is preferred in Bombay too. Ain wood is

some times used for building a major portion of the boat. It is a hard wood and very similar to teak in its properties.

In Lakeshadweep, coconut tree is locally available in abundance, thus coconut wood is still used in local boats, but it is difficult to say with authority, what made early boat builders to use coconut wood. Coconut wood is now used for bulwarks, masts, cross stays, sides ribs, etc. and for cabin removable thatched roofs etc. Mango or breadfruit tree wood is also used. Boats of Lakeshdweep can broadly be divided into two categories based on their use: trading vessels and fishing vessels. Bareues, odies, bandodies, dweep odam or valiya odam are some trading vessels and tharappan, odam, mas odi, odi jahadhoni, mahadha dhoni, kelukkam dhoni, allam dhoni or dhoni, ara dhoni are some fishing crafts and jhaha dhoni is a race boat in Lakeshdweep. Stand odam is the most widely used typical boat of Lakeshdweep. Boats in Lakeshdweep are not built for sale, but only for the use of islanders[11]

Odisha

As in other littoral states of India, references to a number of traditional boats of Odisha are found in the contemporary literature namely Pota (dug out), Nauka, Bhela, Chapa and Padhua. There are some traditional boats, for instance, teppa, padhua, nauka, and patia, which are still in use and built along the Odishan Coast[11]. (Tripati, 2015). As discussed earlier the ancient port cities of Odisha or then Kalinga like Dantapura some identified as Baruna Bandara, Charitrya,Palura, Kalingapatna etc where from merchants of Kalinga commenced sea-voyage with large number of boats. Therefore, a colony of boatman was naturally located in the nearest part of each port-town. The sailors of that region are called *'Kaivarta'* or *' Kandara'* or *'Navika'*. Not far from port of Baruna there is an extensive settlement of that race. The

Kaivartas are principal agents of the merchants and other mariners of Kalinga whose safety of life and property ,during voyage in the ocean, was entirely bondable on them.

The traditional boat builders of Chilika region particularly of Pathra,Sorona and Mahisa area in Orisa are called Bindhani, Barhais and Biswakaramas (carpenters). They build small flat-bottomed boats known as *nauka* or *danga*. Sal is used for construction of nauka. The knowledge of boat building has come down as a family tradition. Bamboos are used as mast, locally called *gudda*.

Historically, the Kaivarta community was a well-organised race,controlled by 'Raja'of their own caste,who was empowered to arrange all necessary rocess of navigation; the boats ,the skilled sailors,the tax,freights etc.These Kaivarta – princes have also established marriage –tie with some Kshatriya – Rajas of Kalinga. For example, a 'Kaivarta-Kumari' named 'Meghavali' was the queen of Netrabhanja, a Maharaja of Druma-raja-kula of 7th century, known from copper plate inscription, discovered from Ganjam district.

The Kaivartas were well known for seafaring skill and technique.They used to drive yawl-like boats within visible distance in the Bay. But while sailing in the deep ocean,they required some special knowlwdge to handle a new type of two masted ship.The symbol of such type of ship is embossed on some ancient Andhra coins.To avoid any danger from cyclonic wind or attack by pirates ,which was not less frequent in the Indian Ocean,they knew how to anchor their ships at nearest islands,which they might have spotted out before their journey.To assit them, some experts in astronomy were employed by merchants to indicate the right direction through the position of stars in the sky during nights a large number of astronomers (*Graha-Vipras*) settled in the coastal regions where sea-voyage was frequent and popular.



Martandabhairav Konark

Now a day's various types of floats, rafts and dugouts are being made for occasional and regular transportation in Odisha. Float is a simple piece of light log able to float and support the person over it on the water. Plantain tree shoots are seen used to serve the purpose of crossing streams in rural area. Floats are found in the Ansupa Lake and in parts of the Mahanadi, Brahmani and Baitarani rivers used by the fisherman. The wood makes used off for such a float is Paladhua (Erythrina Indica), Simili (Bombax Malabari-cum), Debadaru (Cedrus Deodara) and rarely Mango (Mangifera Indica).

There are different types of dugouts used in Odishan waters such as Danga, Catamaran & multiple Catamarans. A single tree log dug or scooped out of its trunk makes a dugout or canoe. It is a long and narrow boat called Danga, Kathua, Huli danga etc in Odia language. Palm & Coconut trunks are used for making of these Danga. Catamaran is an improvised float in comparison to the above boats. More than one log of equal sizes plat formed by lashing makes a Catamaran. The



Elephant Transportation

Catamarans are used for fishing purposes and these are made flat and wide without side wall. Multipurpose Catamaran is made by joining more than one Catamaran so that could undertake a longer journey. This type of Catamaran is called Chapa in southern Odisha the specimens are found in the Chandan Yatra. Another type of boat is called Coracle shaped water crafts. It is a basket shaped one, circular shape and covered with larch Or gum. Generally small streams and occasionally flooded lowlands are crossed by this boat.

A boat or ship in building process prepares the frame at the first instance and other parts are joined subsequently to it. The major components of the boat or ship are hull or frame, sealing, masts (caulking), sail (Ajhala or pala), anchor (nangar), prow and stern (manga) and deck.

Riverine Boats

The ethnographic survey conducted at the villages of Kardi, Mursundhi, Malisahi, Kaleswara and Podapada with a view to recording various aspects of boats, right from the construction processes to the uses to which they are put. Cultural elements such as rituals and festivals associated with boats were also noted down. Information was also collected by interviewing a group of patua boat builders from south-central Orissa. The role of boats in trade activities was observed with special interest as it has a bearing on the understanding of ancient riverine trade. A journey from Boudh to Dholpur was made in a patua trading boat to get a first-hand experience.

Rivers have been used as water routes for trade and transportation. Boats of different types and sizes sailing along the rivers are a common sight in central and westrn Orissa. There are several boat making stations in this region whicvh trace their origin to ancient times. Although changes have



Fishing boat, Sonepur

taken place in the material and equipments used, all the boat making communities still follow the traditional methods of boat construction.

In Orissa two types of boat manufacturing stations may be distinguished : 1. Off-shore stations (in coastal Orissa) where seafaring and fishing boats are constructred and 2. inland stations where riverine boats , which are used to ferry people as well as commodities, are built. There are, however, instances of riverine boats being used for both ferry and fishing purposes. The marine boats differ from the riverine ones both in size and technique of construction.

The boats manufactured in south-central Orissa mostly reverine boats are known as Patua. In central and western Orissa, Kushli (Cargo boats) and Danga (Fishing boats) are constructed. The construction methods of Patua and Kushli are more or less similar. These boats differ only in their size. However, a brief description about reverine boats is given here.

Patua

Patua is the biggest boat used for transporting cargo. At times, Patua has been used to carry stones, particularly Khondolite. These boats are manufactured in the Kantilo-Padmavati region of south-central Orissa, in the lower Mahanadi Valley, by skilled craftsman, following techniques recorded in medieval palm-leaf manuscripts together with the guidelines given in the Kaizvarta Purana.

Patua boats are specious and provided with a roof (detachable) made of local paddy stacks for the protection of the commodities and also to provide shade. They are equipped with cooking facilities (Chullah, vessels etc.) and have arrangements for sleeping which are essential for long-distance journeys. As these boats have highsides, they are sometimes attached with steps to climb on to them. Gemnerally six to seven prsons carry a patua with the help of oars, manga or pedal, and kata, a long bamboo stick used to drive the boat where the water level is low.

Kusli

The term Kusli has been derived from the word Kosala. This boat is native to central and western Orissa which had been the southernmost extremity of the famous Dakshina Kosala in Medieval times, and hence the name Kusli for the boats. In this region it is manufactured almost in every village that consists of a fishing community. The guidelines given in palm-leaf manuscripts of medieval period, written in proto-Oriya script are followed during the construction of these boats. Kushli is smaller than the Patua. It serves both cargo and ferry purposes. It is generally used to carry trading commodities from Boudh to Dhama (in Sambalpur district) which is upstream of Mahanadi, and sometimes up to the town of Sambalpur. In summer, taking Kusli from Sonepur onwards is a difficult task owing to the huge protruding outcrops.

Danga

In central and western Orissa, fishermen use the locally manufactured boat known as Danga for fishing activities. These boats are very small in size. In addition to fishing, they have been used for trade purposes, particularly in summer, when water level in the river goes down exposing outcrops. Motte (Acharya 1955) and Hunter (1873) mentions about such boats carrying commodities to the upstream areas during summer. On the Mahanadi, the boatmen also ply them. Danga boats are preferred on the tributaries, especially Tel and Salunki and Bagh which do not have such depths required for sailing huge boats.

The traditional boat building in Odisha is affected due to the appearance of mechanized boats. In Odisha, there are various places that have the traditional boats and boat building technology. The main regions are Chilka coast in sourthern Odisha, Mahanadi valley (Sonepur to Cuttack), Balasore, Konark & Astaranga area of Puri district, Kujanga in Jagatsinghpur district, etc. The traditional boat builders of



Fishing boat Barua river mouth

Chilika region are called Bindhani, Barhais and Biswakaramas (carpenters). They build small flat-bottomed boats known as *nauka* or *danga*. In sonepur, Dihasahi near Choudwar and Kujanga traditional boat builders are making big size boats mainly for occasionally passenger transportation, which is found at Dhavaleswar ghat near Cuttack. Now day's traditional boats are only used for crossing rivers, coastal transport and fishing. It is, however satisfying to note that traditional boat building technology is being harmoniously combined with modern technology to produce more efficient vessels.

The palmleaf manuscripts with illustrations which are available in OIMSEAS 1. Arnava Vihara Vilasa, 2. Ratnakara Vihara Vilasa, 3. Koshali Nauka Silpa Sashtra, 4. Ektalia Nauka 5. Tinitalia Nauka. These manuscripts are in the collection of the Orissan Institute of Maritime and South East Asian Studies. These manuscripts though of later stage throw light on the boat building tradition of coastal Odisha which is still going on. A glimpse of these manuscripts are discussed. However, a complete edition of all these manuscripts awaits publication

Arnava Vihara Vilasa

This is a small palm leaf manuscript of medieval Orissa written in Sanskrit contains 14 folios. Through copying from time to time the language is diluted and faulty in many cases. This seems to be incomplete but records about the boats plying in the sea for trade. The pictures found in the manuscript do not contain the names of boats. Only the measurements in cubit are given with their nomenclature. The script of the manuscript is Devanagari

The work starts with obeisance to the goddess Kalika which is probably considered as the deity of navigation. It may be mentioned here that the worship of the Goddess Kalika is

Boat Design in Odishan Palmleaf Manuscript





Arnava Vihara Vilas





Ratnakara Vihara Vilas



Usavilas



Gitagovinda

prevalent in the coastal north Balasore and Midnapur districts. She is, as known from the mythology connected with her with the navigation in the sea. Since the goddess is being worshipped since long in the Balasore and Midnapur region the manuscript must have been composed somewhere there.

Ratnakara Vihara Vilasa

It is a rare manuscript of Medieval Odisha which was collected by the OIMSEAS. It describes in detail about the construction pattern, measurement, selection of wood, use of rope (tree bark), pro and stern, etc. The manuscript begins with an prayer to goddess Kalika.

Tintalia Boat (Nauka Silpa)

It is a rare manuscript which deals with the construction of Tin Talia boats. The details have been given in traditional measurements. The name of various parts of the boat have been described in detail. The parts like agramanga vidhana, length of the Talei, Nati Dandi or rope. Heat treatment is applied to obtain desired shape of the wooden planks.

Kosali Naa Silpa

This is again another manuscript which describes about the weason of boat making and also different parts of boats. As has been mentioned in the manuscript the Kosali Naha (boat) begins on the CHaitra Poornima. The boats are manufactured with the help of Sal logs. The length of the boat is 24 hatas, 3 ½ hata in width. Wooden planks are joined together. Different parts of the baot has been described in colocal language such as talidanda, bedha, kalanda, manguala, danda, nati dandi, singa dandi etc.

Ektalia Nauka

Similarly as has been described in the *ektalia naha silpa* manuscript the measurements are given in the manuscript.The

broad and detail making process has been described. The name of the boats are as follows:

Talidanda, made of Sal and Fasi woods and the other parts are described as palanda, bauti, bedha mundi, olikanta, akhiphodo, vanikanta, singa dandi, talei, karimanga, pakhia etc. After construction the boat makers consecrate with prayer which is as follows:

At the end the copier mentioned his name as Lingaraja during the reign of Sri Gajapati Gaudeswara Nabakoti Karnnata Utkala Kalabergeswar Veeradhi Veerabera Mangaraja Sri Divyasinghadeva Maharaja.

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Model of a Traditional Boat, Paradip Maritime Museum

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